

SEPTEMBER 1993, VOLUME 1, NUMBER 6



PROFESSIONAL

GRASSROOTS POWER

How IBM Nurtures User Groups & SIGs



\$6 U.S.
\$8 Canada

ANNOUNCING OS/2 WEEK, A WEEKLY FAX NEWLETTER

Don't boot up

Now start every work week with the most up-to-the minute news in the fast-paced OS/2 world:

- ▶ product ships and slips
- ▶ key personnel changes
- ▶ developing market strategies
- ▶ strategic shifts

Executives and experts will find the report waiting on their desks every Monday morning. Attractively designed, *OS/2 Week* is two to four faxed pages of cutting-edge industry news. Concise. Sharply written. No fat. Just the facts decision makers need to compete and survive.

No one can deliver the inside scoops on the OS/2 market like the staff of *OS/2 Professional*. Now that insider information is at your fingertips—with *OS/2 Week*.

Fifty weeks of *OS/2 Week* is \$400—the best computer intelligence bargain around. However, charter subscribers who order the newsletter prior to the first late September transmission will be able to subscribe at a one-time introductory rate of \$200.

All subscriptions are for individual eyes and may not be copied or re-faxed.

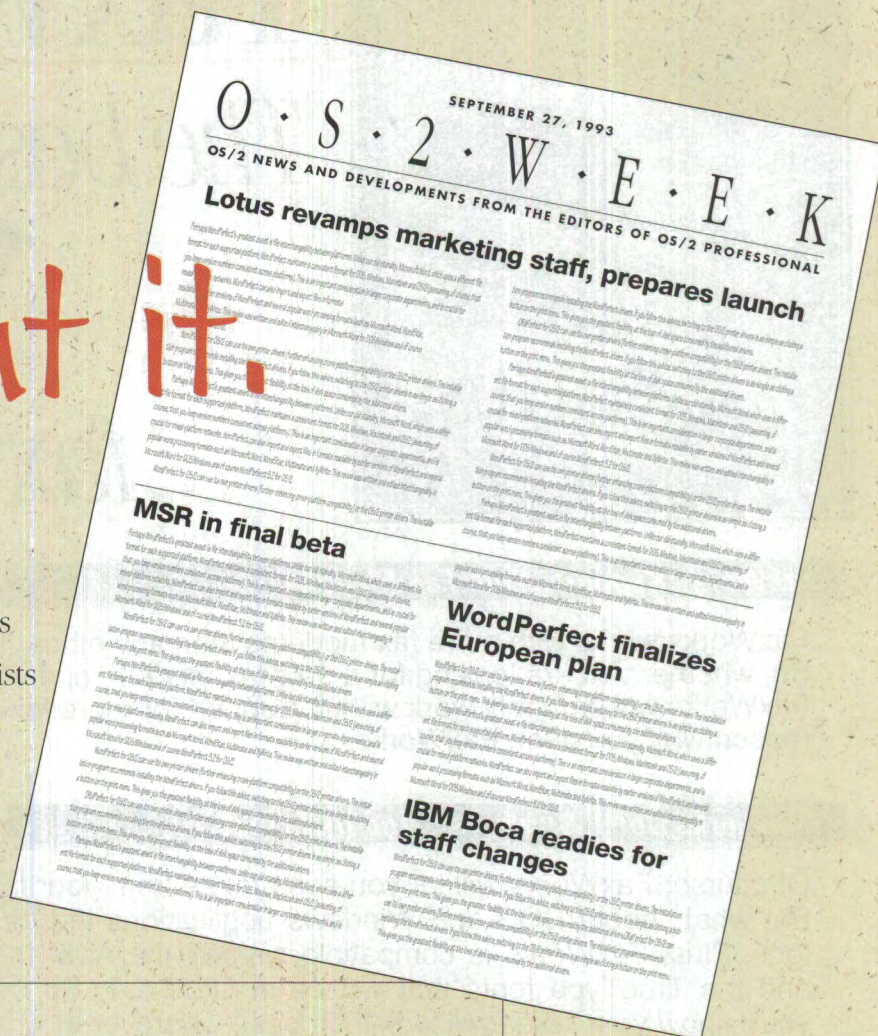
TO SUBSCRIBE BY PHONE, CALL 301-770-4 OS2 (4672).

PUBLISHED BY THE EDITORS OF OS/2 PROFESSIONAL.

without it

Designed to meet the needs of:

- ▶ Information technology executives
- ▶ Marketing and advertising specialists
- ▶ Strategic planners
- ▶ Developers
- ▶ Cutting-edge expert users



Name _____

Title _____

Company _____

FAX _____

Address _____

Voice Phone _____

Billing information

☐ VISA ☐ MasterCard ☐ Check ☐ Please bill me \$ _____ Amount

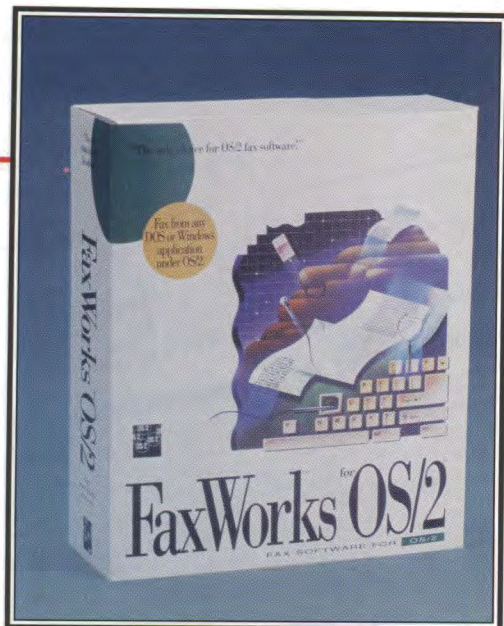
Card Number _____ Exp. Date _____

Signature _____

Please check the appropriate box below:

<input type="checkbox"/> Marketing/Advertising	<input type="checkbox"/> Operations	<input type="checkbox"/> News Media
<input type="checkbox"/> Developer/Engineer	<input type="checkbox"/> MIS	<input type="checkbox"/> Other _____
<input type="checkbox"/> Sales	<input type="checkbox"/> Managerial	

OR YOU MAY FAX OR MAIL THE COUPON ABOVE.



FaxWorks™

The best



fax solution

FaxWorks Supports Your Fax Modem!

FaxWorks works with more fax modems than any other OS/2 fax software. Period. So, whether you are looking for a new fax modem, or if you already have one, FaxWorks will probably work with it! Support for more fax modems, another reason why you need FaxWorks.

FaxWorks Does Windows... And DOS, too!

Of course, FaxWorks will let you send faxes from your favorite OS/2 applications. But what about DOS and Windows applications in OS/2? FaxWorks does that, too! Plus, FaxWorks is compatible with all the ATM fonts that come with OS/2 and the TrueType fonts that will be in OS/2 2.1. So use FaxWorks. That way, you'll know your faxes will look their best, wherever they come from.

FaxWorks Knows LANs!

This all sounds good but, what if you want to share? Well, FaxWorks OS/2 is also available for any LAN that supports OS/2. Now you can let everyone on the network send and receive faxes from the comfort and privacy of their own computer. No more standing in line to send a fax! No more re-dialing because of a busy signal! FaxWorks knows LANs!

SOFTNET
The Standard in Fax Software
1-800-4FAXWORKS

380 Interstate North Pkwy. Suite 150 / Atlanta, Georgia 30339
(404) 984-8088 Fax (404) 984-9956

FaxWorks is a trademark of SofNet, Inc. Developed by Keller Group, Inc. All other referenced products are trademarks or registered trademarks of their respective manufacturers.

SPECIAL OFFER

\$99.00

ARTICLES

18 SPECIAL REPORT Grassroots Power

Moving beyond its traditional focus on corporate users, Big Blue is now paying closer attention to user groups—with good reason. Here's how you benefit.

BY RICH MALLOY

28 FEATURE Hard Up for Hard Disk Space?

As operation systems and advanced programs hog more and more megabytes, it won't be long before your drive becomes hard up for space. Here are some options.

BY MARLENE SEMPLE

34 CONNECTIVITY Groping for Groupware

There may not be much out there now, but groupware will soon become a major part of OS/2's productivity.

BY WAYNE RASH JR.

40 USER PROFILE In the Fast Lane with OS/2

Biker Pat Murphy revvs up with OS/2, and helps a nuclear station stay cool.

BY ANNE LONGSWORTH

50 VENDOR PROFILE Booking on the Future of OS/2

Publishing books in any field is a gamble. In the OS/2 field, that gamble was even more risky. But Diane Littwin of Van Nostrand Reinhold is out front to prove that OS/2 books can hit the market running.

BY WAYNE RASH JR.

99 WANDERLUST Inland Paradise

North America's largest natural palm oasis—with a few "unnatural" embellishments has become a world-class travel destination. Check out Palm Springs beyond the Interchange.

BY VICTOR BLOCK

COVER PHOTO: DEBI FOX. COVER STYLING: SUSAN V. LEVINE.
COVER DESIGN: ELIZABETH BLACK.



PAGE 18



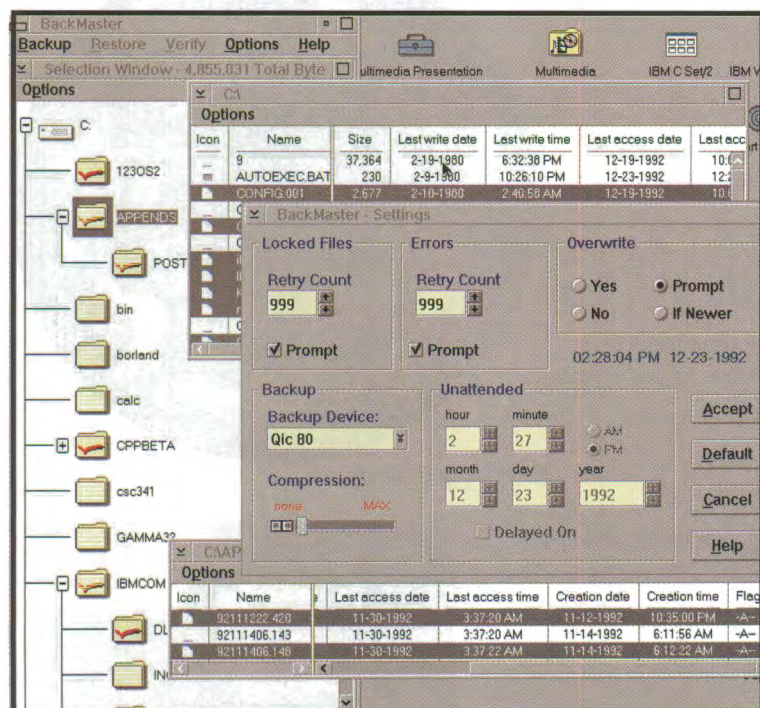
PAGE 40



PAGE 50

Why Take Chances?

Is your data backed-up, or do you just feel lucky?



BackMaster

The Only 32-Bit Backup for OS/2 2.X.
Multi-Threaded!

ONLY \$79.95

Easy to use PM Interface

File selections are fast and easy. If you can open a Work Place Shell Drive or folder Icon, you already know how to navigate through the file selection process. Selecting files is as simple as point and click.

HPFS and FAT file systems

BackMaster supports both FAT (File Allocation Table), and HPFS (High Performance File System). Backs up Extended Attributes, files with Long File Names, Workplace Shell, and System files.

Backup to QIC 40/80 Tape!

Backmaster supports backups to a variety of QIC-40/80 floppy based tape drives including Archive XL, CMS Jumbo, Iomega 250, Mountain 4000/8000, Summit 120/250.

Read your old DOS tapes!

Because BackMaster uses a standard QIC format for tapes instead of a proprietary format, you can easily read QIC-40/80 DOS tapes. You can Migrate from DOS to OS/2 by simply backing up using your OS software and restoring with BackMaster.

Variety of Backup Options!

Make Total, Partial, or Incremental backups in the background or unattended.

Uses STAC Data Compression.

Uses LZS Data Compression from STAC Electronics for performance and reliability. Compression ratios average 2:1.

Free Demo on our BBS.

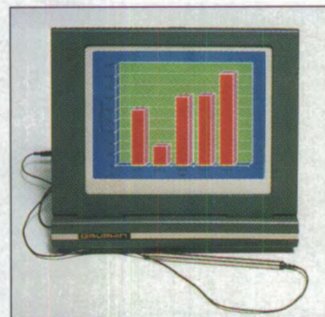
Call our BBS for a free demo version, and see why BackMaster makes backing up OS/2 so easy, you will backup more often.

MSR Development

Rt 7 #6409 Nacogdoches TX, 75961
Ph: (409) 564-1862, BBS: (409) 560-5970

DEPARTMENTS

- 11 INPUT**
Observations, criticisms, and kudos from our readers.
- 13 BYTES & PIECES**
OS/2 Week premieres; the Micrografx up/down love affair with OS/2; Sytos' "secret" recovery plan; a whopper of a flopper in Boston; and more.
- 15 ZACHMANN'S VIEW**
OS/2 application catchup—future prospects are really much better than the critics assume.
BY WILLIAM F. ZACHMANN
- 45 DOT EXE**
WordPerfect 5.2 for OS/2 is reviewed by Bradley D. Klierer and Edwin Black.
- 55 TNT: TIPS & TECHNIQUES**
Here's how to make REXX work for you.
BY GORDON SCOTT
- 61 CODE CACHE**
Introduction to Presentation Manager, Part III: Containers, Views and More Threads.
BY CAREY GREGORY
- 83 US/TOO**
Gossip and chip talk about the OS/2 crowd—Patrick Pearce, Joel Shore, Allison Johnson, Bill Rich, Louis Gerstner, plus future Interchanges.
- 85 MARKETLINE**
Central Point beta-testing anti-virus protection; OS/2 BackupWiz premieres; Allen System announces a transfer data package; ScheduPerformance helps you prioritize; and much more.
- 91 BOOKSTAX**
Alan J. Weiner reviews *OS/2 2.1 Unleashed* by David Moskowitz & David Kerr, et al.
- 95 THE LAW**
The latest in the Justice Department's antitrust suit against Microsoft; money for defense computer technology; skipjack software; and more.
- 99 DATA DATES**
Networld '93 in Dallas; OS/2 Professional Interchange in Palm Springs; PC Expo in Chicago; and more.
- 112 LET THE CHIPS FALL**
OS/2 Wars and Winners.
BY STEPHEN FRIED

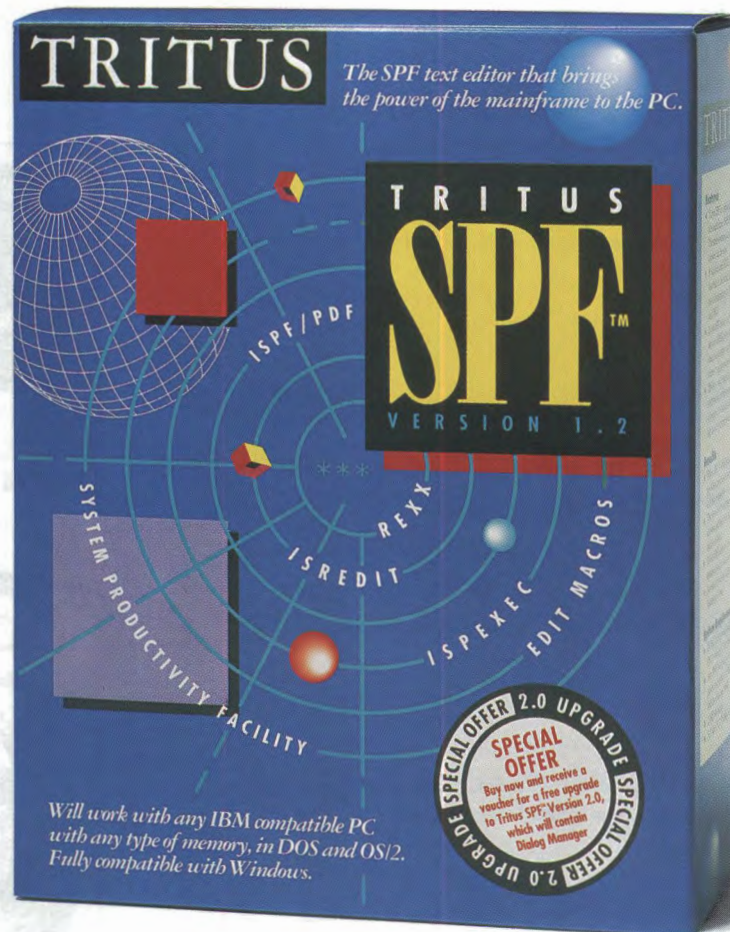


PAGE 85



PAGE 91

The only mistake Tritus SPF™ can't undo is your buying another text editor.



Make no mistake about it, only Tritus SPF 1.2.5 has unlimited UNDO/REDO. Tritus SPF is the powerful PC version of the mainframe editor ISPF/PDF and uses the same keystrokes. Features include modifiable panels, keyboard mapping, and integration with Micro Focus Workbench and WorkFrame/2.

REXX edit macros use new optimization techniques for increased performance. You can edit files up to 256 MB in size and 64,000 bytes in width using standard record delimiters, custom delimiters or no delimiters. CUT and PASTE using private or public clipboards (Windows, OS/2)

with append or erase options. A new RECORD mode captures keystrokes automatically and assigns them to a key for playback or future editing. All features, including REXX, work in DOS and OS/2.

Tritus SPF 1.2.5 is available now for \$99 plus shipping and includes a free upgrade to version 2.0 with Dialog Manager. Also included is an OS/2 32-bit version and over 600 pages of documentation. The Prentice-Hall REXX Language book is available for an additional \$25.

We offer a 60-day money back guarantee. To order, call 1-800-321-2100 for same day shipping.

TRITUS

Tritus, Inc., 6034 West Courtyard Drive, Suite 120 • Austin, Texas 78730-5014 USA
(512)794-5800, 1-(800)321-2100, Fax (512)794-3833

Circle #65

PUBLISHER'S MEMO

Today we are proud to announce that *OS/2 Professional* magazine is 200,000 strong. That speaks volumes about OS/2 and about our magazine as the sole mass circulation monthly that serves it. The growth and success of *OS/2 Professional* is nothing less than a barometer of the extraordinary proliferation of the world's most promising operating system. And we are happy to announce that lots of exciting changes are already underway here.

The first feature is the most obvious: Our magazine has grown into a perfect-bound publication that will allow us expansion, production flexibility and last-minute news coverage that the stapled format could not.

We have also launched a major expansion of our staff. The most profound additions are in the editorial realm to sharpen our technical, feature and news coverage. We worked hard to garner some of the most talented and best known names in the computer world. Alan S. Kay joins our staff as executive editor. Formerly the executive editor of *Corporate Computing*, Kay brings us more than two decades of sharp-edged journalistic and publishing experience. Anne Longworth, formerly a *Corporate Computing* assistant editor, has joined as a staff writer.

Rich Malloy, formerly executive editor of *Byte Magazine*, joins our team as a senior contributing editor, with responsibilities for helping shape editorial thrust and producing regular features and reviews for the magazine. His first contribution is this issue's cover story on user groups and SIGs. Malloy's byline will be seen regularly in the magazine, and he also serves on the *OS/2 Professional* Awards judges panel. Respected industry analyst Will Zachmann has also become a senior contributing editor, shaping editorial direction in addition to his roles as Awards judge and Board advisor to the OS/2 Professional Interchanges. The multi-dimensional and widely read Wayne Rash becomes our consulting editor, with broad editorial and planning responsibilities.

We have formed a tough-edged seven-person editorial nucleus—Kay, Longworth, Malloy, Rash and Zachmann, editor Brad Kliever and myself as we push OS/2 coverage to new heights.

You can see this powerful new team in action at once with the launch of our weekly OS/2 intelligence service, *OS/2 Week*. As a weekly fax newsletter, *OS/2 Week* will deliver the latest market developments and insights every Monday morning to the key decisionmakers who can't afford to strategize based on rumor and vapor. They need facts. *OS/2 Week* will be the quintessential reality check and insider report every OS/2 planner needs to make informed up-to-the-minute decisions.

We have also added to our advertising sales and service staff. Janet Owens, formerly of the *Washington Post*, joins the magazine as a national advertising representative. As a seven-year veteran with expertise in computer advertising, Owens will assist our ad manager Richard Dubin in attracting the quality vendors that users need to expand their own systems.

All these new staffers, plus a core of additional technical, administrative, and service support people in both our Minneapolis and Rockville offices have joined us in just the last several weeks. To house them all, we have moved into large, bright new quarters in both Minneapolis and Rockville. It has been a personal and professional whirlwind for us all, but no less a whirlwind than the dynamic growth and changes for the better underway in IBM and in the OS/2 world. We are grateful that we are the only monthly magazine serving this exciting field, and will continue as the dominant magazine for the foreseeable future, even as we encourage other smaller niche publications to serve the OS/2 community.

In that vein, we are putting the finishing touches on the OS/2 event of the year, the OS/2 Professional Interchange. In fact, we have even announced our twice yearly dates for the next two years.

It all comes as *OS/2 Professional's* newsstand coverage has exploded in the past several months to include virtually every major computer chain and bookstore chain in the United States and Canada. That includes CompUSA, Egghead, Software Etc., Babbages, Barnes and Noble, and B. Dalton, as well as hundreds of independent computer retailers and bookstores. Although it takes three to six months to measure the sales of any issue, our distributors report 90-day figures of an astonishing 90 percent-plus sell-through of our July issue. That parallels the lightning sales of OS/2 itself. So if friends find racks have sold out of the magazine, ask them to be patient and wait for the reorder.

If you think we've announced more than a full plate of additions and expansions in this column, you ain't seen nothing yet. *OS/2 Professional* is like OS/2—we're up and running, not up and coming. And we're running fast toward a future that is global and rewarding for both the OS/2 operating system and the users we both serve. ♦

Edwin Black



Read

First came the best-selling 32-bit operating system IBM OS/2,[®] with over 2,000,000 copies sold since March 1992.

Now comes the best-selling "How To" book for OS/2, *Client/Server Programming with OS/2 2.0*.

With over 45,000 copies sold, programmers are obviously recognizing the advantages of developing client/server applications on OS/2.

Authors Bob Orfali and Dan Harkey provide a comprehensive description of how to create and utilize OS/2 client/server applications, LAN communications, the DataBase Manager, presentation services, transaction servers and the new 32-bit C Set/2 compiler.

You'll also be able to read about other client/server products, such as DDCS/2[™], TCP/IP, CPl-C, NetWare[®] and Systems Object Model (SOM).

Will Zachman writes that this book is "crammed full of excellent information on OS/2... [it's] a veritable encyclopedia of stuff one needs to know these days."

For an authorized IBM dealer near you, or to order OS/2 2.0, call 1 800 3-IBM-OS2.

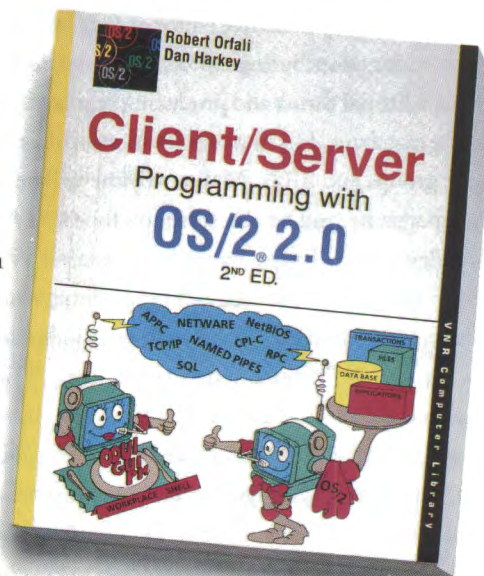
Client/Server Programming with OS/2 2.0 is available in bookstores. You can also order it from

either Van Nostrand Reinhold at 1 800 842-3636 (ISBN Order #0442-01219-5), or from IBM at 1 800 879-2755 (Order #C325-0650).

It's just one more example of how reading can help make you a better writer.

Operate at a higher level.SM

this and see what develops.



VAN NOSTRAND
REINHOLD 

IBM, NetWare and OS/2 are registered trademarks, DDCS/2 is a trademark, and "Operate at a higher level" is a service mark of International Business Machines Corporation. NetWare is a registered trademark of Novell Inc. ©1993 IBM Corp.

IBM[®]

How to contact OS/2 Professional

Letters to the editor must be addressed: **Input, OS/2 Professional**, 172 Rollins Ave., Rockville, MD 20852. All letters must be signed on letterhead, no more than two typed, double-spaced pages. Diskette files accepted in unformatted ASCII or Microsoft Word for DOS. All letters become the property of *OS/2 Professional*, and will be edited for size, content and clarity. Diskettes will not be returned. Letters may also be faxed or e-mailed to the addresses below. Please do not ask for technical help from Input.

General correspondence, such as inquiries and technical questions, must be addressed: Dept. C, *OS/2 Professional*, 172 Rollins Ave., Rockville, MD 20852.

To contact us by Fax: (301) 770-7062.

To contact us by E-mail:

OS/2 Professional
MCI-Mail: 560-3615
Internet: os2pro@mcimail.com

Bradley D. Kliever:
MCI-Mail: 470-2447
Internet: bkliwer@mcimail.com
CompuServe: 70262,2724
BIX: bkliwer

All unsolicited software, diskettes, hardware samples, evaluation units and manuscripts are sent at the risk of the sender and *OS/2 Professional* assumes no responsibility for their receipt, storage or return.

How to subscribe to OS/2 Professional

Subscriptions for 12 monthly issues are \$30 in the United States, \$45 in Canada and Mexico and \$75 airmail to other countries. Subscriptions may be paid by check or money order, Visa or MasterCard or billing to a corporate address.

BY E-MAIL. For fastest service, subscription requests may be submitted electronically to the *OS/2 Professional* MCI mail box (560-3615 or os2pro@mcimail.com). Electronic requests must be preformatted using the OS2PRO.EXE program. The program and documentation are available as OS2PRO.ZIP through File Area 15 of the CompuServe OS2USER forum (GO OS2USER). The file may also be found on OS/2 BBS systems such as the OS/2 Shareware BBS at (703) 385-4325.

By phone: Call (301) 770-4 OS2 and use our automated telephone subscription program.

By FAX. Fax subscription requests w/o cover sheet on a single page to (301) 770-7062. Your request must be on corporate letterhead and include billing and/or credit card information plus a signature and title. Address your request to "New Subscriptions."

By mail. Send \$30 check or money order, corporate billing, or credit card information to New Subscriptions, *OS/2 Professional*, 172 Rollins Ave., Rockville, MD 20852.

Back issues: Back issues, while supplies last, can be purchased for \$7 each by sending check or money order and specifying the issue requested. We cannot accept corporate billing or credit card charges unless the back issue request is part of a new subscription.

Administrative, Editorial & Production Offices: Edwin Black, Publisher and Editor-in-Chief, Alan S. Kay, Executive Editor, Margaret M. Dutcher, Assistant Publisher, 172 Rollins Ave., Rockville, MD 20852, Phone: (301) 770-3333 FAX: (301) 770-7062.

Editor's Office: Bradley D. Kliever, Editor, 5328 Chicago Ave., So., Minneapolis, MN 55417, Phone: (612) 823-2657, FAX: (612) 823-7945, MCI Mail: 470-2447.

Advertising Sales: Richard B. Dubin, Advertising Sales Manager, 33 Eton Drive, Slingerlands, NY 12159, Phone: (518) 489-4034, FAX: (518) 489-4045.

Janet Owens, Advertising Representative, 172 Rollins Ave., Rockville, MD 20852, Phone: (301) 770-3333 FAX: (301) 770-7062.



Publisher and Editor-in-Chief

Editor

Executive Editor

Consulting Editor

Assistant Editor

Art Director

Assistant Art Director

Assistant Publisher

Controller

Manager of Business Development

Administrative Assistants

Advertising Sales Manager

Advertising Representative

Correspondents and Contributing Writers

Contributing Artists and Photographers

Production Manager

Production

Director of MIS

Data Management

Subscription and Distribution Services

Legal Counsel

Edwin Black

Bradley D. Kliever

Alan S. Kay

Wayne Rash Jr.

Anne G. Longsworth

Elizabeth Black

Susan V. Levine

Margaret M. Dutcher

Catherine Honigsberg

Teresa C. Kirby

Alexandra T. McDonald

Jodi Henning

Richard B. Dubin

Janet Owens

Victor Block, Timothy Burger,
Todd Crowe, John C. Dvorak,
Thomas Hamburger,
Hank Kliever, Jeff Levine,
Rich Malloy, Peter Norloff,
Barbara Opall, Gordon Scott,
Marlene Semple, Karen Thomas,
Herb Tyson, William F. Zachmann

Leonard J. Eisenberg, Vickie Lewis,
Tom Reed, Rick Stewart,
Steven Stregovsky, Joanna Wiebe,
Arlene Williams

Brendan Connors

Affiliated Graphics, Hart Press

Christopher J. Wees

Martina DeLude, DK Micro,
MediaAutomation

Steve Miller

Thomas Crooks, Esq., Chicago
Arnold Kalman, Esq., Philadelphia
Dan Willard, Esq., Washington, D.C.

BPA International Membership Applied For August, 1993.

OS/2 Professional is published monthly and mailed to qualified OS/2 users by I.F. Computer Media, Inc. Send correspondence, and all requests for qualified subscription forms to *OS/2 Professional*, 172 Rollins Ave., Rockville MD 20852, (301) 770-3333, FAX: (301) 770-7062.

OS/2 Professional is an independent publication not affiliated in any way with IBM. OS/2 is a registered trademark of IBM. All other trademarks belong to their respective companies.

OS/2 Professional accepts no responsibility for and will not return unsolicited manuscripts, photographs, artwork, software, data files, evaluation equipment or computer diskettes.

Printed in the U.S.A.

INDEPENDENT VENDOR LEAGUE™

IBM®

- OS/2® -

OPERATE AT A HIGHER LEVEL™

**This Specially
Designed
Package . . .**



**. . . Gets You
In Gear!**

"Stepping Up To OS/2" helps migrate you from other operating environments and systems, while the "Getting Started" video shows you how to install 2.X. "OS/2 Workplace Shell"

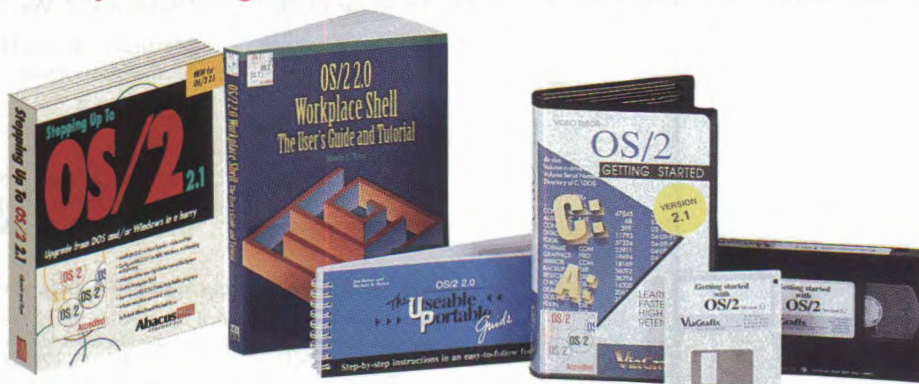
teaches you the ins and outs of the interface and the "Portable Guide To OS/2" is an easy access, "lie flat" reference with clear instructions.

Stepping Up to OS/2 2.X book.....	\$16.95
Getting Started 2.X VHS video/disk.....	39.95
OS/2 Workplace Shell book.....	24.95
Useable Portable Guide To OS/2 book.....	14.95
Regularly	\$96.80



— Special Offer Only \$75.00 —

For Easy Ordering Call 1-800-342-6672 and Ask For Item No. 1060



To Receive Your Free Catalog of Additional OS/2 Products
Call Toll-Free 1-800-342-6672

I.D. # P2



Comments, criticisms and observations

Kudos and comments

Congratulations! It's about time someone published a magazine for the rest of us OS/2 users who think that OS/2 2.0 is more than just a technical wonder that is superior to Windows. We actually use the system to get our work done. I'd like to see more product review articles and stories about how other companies are exploiting OS/2's resources.

Steve Levenson
Adar International
New York, New York

A friend of mine brought me the January to May, 1993 issues of *OS/2 Professional*. I am so impressed with this magazine and, since I am so hungry for information on the OS/2 operating system, I don't want to miss an issue. Who do I call?

Victor Cruz
Bronx, New York

[Editor's Note: OS/2 Professional's subscription line is 301 770-4OS2.]

While attending PC EXPO in June, I came across the *OS/2 Professional* booth and decided to take advantage of the free back issues which would allow me more than just a sneak peek at the magazine I've been hearing so much about. So first let me extend my congratulations on a seemingly well-polished magazine and also add a few comments.

Curtail the discussions of emotional topics. Too much evangelizing will only distract from the quality of the magazine as perceived by the potential new subscriber.

Give us more articles with meat. Coupled with the dissimilarities of programming for OS/2 versions Windows or DOS, there is even a higher need for articles that discuss the "how" and not just the "why."

Speaking of "how," Carey Gregory's "Code Cache" [July] is in need of a

few corrections. First, the 32-bit `DosCreateThread ()` will also handle the allocation and deallocation of the thread's stack. If you are referring to the 16-bit equivalent, however, his statement is correct, but he shouldn't be writing 16-bit articles when 32-bit programming is the topic *du jour*.

He also states that "in general, you'll need a minimum stack size of 2K [for auxiliary threads]." Carey, I hate to burst your bubble, but we're no longer in the days where 16K RAM total on the machine and 160K single-sided drives are the norm. The well-advertised advantage of virtual memory is that you no longer have to worry about wasting an extra 10 bytes of storage for fear of causing your application to not run due to lack of memory. While I am not advocating using a 1M stack, I find it a lot easier to use a 32K stack and forget about it instead of using 4K and increasing or decreasing the size as needed.

Larry Salomon, Jr.
OS2man@panix.com

The bash is over

Thank you for finally adopting an adult attitude toward the relationship between OS/2 and Windows. After the first two issues, I cringed a bit when I picked up the May issue. Other than Dvorak's traditional diatribe, it was a breath of fresh air to see editorial and articles alike treat the subject in a rational manner.

I'm a long-time Windows user, with a heavy commitment of time and money in that environment. From my perspective, the growth potential represented by OS/2 2.1 is very intriguing. From where I sit now, it looks like 2.1 will fulfill my needs better than Windows NT. (If I was running a medium-to-large network, the reverse would likely be true.) That certainly wasn't the case when OS/2 2.0 came out, but even IBM appears to be

capable of learning from past mistakes.

The fine article on 2.1 by Herb Tyson [May Special Report] let me know that this version will likely be compatible with my rather complex multimedia-capable 486 and most (if not all) of the Windows 3.1 and DOS software that I run on it.

Thanks also for dropping the use of "Not There" to describe Windows NT. NT looks like it's going to be a fine operating system for servers, and a real challenger to UNIX in that role. OS/2 may have networking capabilities, but I think that its "today" emphasis ought to be on upgrading the single user/small workgroup applications of DOS plus Windows 3.1.

Dan Deckert, Partner
User Friendly Services
[74156,1432]

Not just professionals

Thank you for your magazine. As a new IBM PS/ValuePoint 486DX customer since November 1992, I have been both elated and disturbed some times by its content. I would like to suggest a title change from *OS/2 Professional* to *OS/2 for Everyone*. Your title reflects an elitist attitude such as IBM has fostered for years.

I had done five years of research on computers before I made the decision to buy IBM's. I bought the 2.1 and tried to install it myself. It went smoothly until disk #17, where I got hung up when it reached the part about applications migrations. I was bailed out by the technical support people who are wonderful and patient, even if they do not always have the answers. They are remarkable telephone teachers who have a degree of humility that is hard to find.

Leah J. Altmayer
Public Health Research
Levittown, New York

continued on page 53

THIS *or* THIS?

DCF/2—DISK COMPRESSION FOR OS/2



Let's face it, the price for OS/2's additional power is disk space—anywhere from 20 to 50 megabytes depending on system options and available memory. The DCF/2 can reduce this space requirement so that even small-disk laptop computers can enjoy the 32-bit multitasking power of OS/2.

More than just simple compression. The DCF/2 offers OS/2 users an externalized facility guaranteed to grow with your OS/2 desktop. You can control what type of compression is performed on individual files by specifying multiple Virtual Disk Units (VDUs). You control how and when a disk file is compressed by where you store it.

Increase your disk capacity by 35% to 70%

Supports FAT & HPFS

\$129.95

Proportional Software Corporation

1717 Linden Lake Rd., Fort Collins, CO 80524

Tel. (303) 484-2665 • Fax (303) 484-2670

Circle #22





BYTES & PIECES

News and trivialities, important and obscure

OS/2 Week premieres

Keeping up with the fast-paced world of OS/2 is about to become even easier for key OS/2 marketing and technology executives. Starting in late September, the editors of *OS/2 Professional* will publish a weekly fax newsletter, *OS/2 Week*. The multi-page newsletter will offer up-to-the-minute, concise, in-depth news reports on product plans, personnel shifts, strategic alliances, and other key marketplace and industry news.

Delivered each Monday morning, *OS/2 Week* will provide vital insider information to executives and independent users alike. *OS/2 Week* will be the quintessential reality check and insider report every OS/2 planner needs to make informed, up-to-the-minute decisions.

OS/2 Week will be priced at \$400 for a 50-week subscription, but is available at a one-time introductory rate of \$200 if ordered prior to the start of publication. Orders including name and fax number can be faxed to (301) 770-7062, or can be ordered through the OS/2 hotline at (301) 770-4OS2.

Anne Longworth

How now, Micrografx

The up-down love affair between Micrografx and OS/2 is getting another tickle. Micrografx chairman, J. Paul Grayson, was recently profiled and interviewed in the New York Times. Asked about not

renewing his contract with IBM for work on OS/2, and whether he thought OS/2 was "dead," Grayson replied, "I think OS/2 is already successful, and its probably meeting IBM's expectations. But demand for applications is, uh, not particularly robust. It seems prudent that we focus on the Windows environment." That's a long way from the unqualified statement of support Grayson gave OS/2 from the podium last November at Fall COMDEX. When *OS/2 Professional* asked IBM vice president of marketing John Patrick whether Micrografx was still excited about OS/2, he answered, "I don't know."

Eli Allen

Systos recovery plan

Users of Systos Plus, the dominant OS/2 backup software, may have discovered that something is definitely missing from the menu: how to restore a document. One frustrated user who recently spent 30 minutes trying to locate a restore command finally called the manufacturer, Sytron. He was surprised to learn that the manual that comes with the product is not even an OS/2 manual. In its rush to deliver the first major native 32-bit backup program, Sytron did not have time to rewrite its three-year-old DOS-based manual. What's worse, that old manual did not include the direct restore instructions.

Sytos Plus does in fact

restore files and directories, but the procedure is complicated and almost certainly requires a phone call to Sytron at (508) 898-0100 for support (See DOT EXE, March-April).

The friendly folks at Sytron are the first to admit their mistakes and have assured *OS/2 Professional* that the new OS/2-specific manual is on its way. And updates of Sytos Plus will include easy-to-follow restore prompts.

Eli Allen

Whopper of a flopper

There was a lot of grumbling at the Business Software Solutions conference held in Boston August 24-26. The show now runs in tandem with the Software Development Conference.

Business Software Solutions was formerly known as the "Windows and OS/2 Conference." But show manager Miller-Freeman abandoned the moniker after a less-than-robust showing last January in San Jose reflected increasing disenchantment from constituencies loyal to either platform. *OS/2 Professional* became the leading OS/2 co-sponsor of the renamed event held in Boston.

OS/2 registrants seemed less than happy about the evolution of the conference. "Renaming the show was a big mistake," said a LAN consultant from Constellation Technology who asked that his name not be used. "I came

here last year and the show was twenty times better."

Many OS/2 exhibitors in Boston were expecting 15,000 to 20,000 visitors, but were sorely disappointed. Show management told *OS/2 Professional* that only 5,000 persons had preregistered to the Business Software Solutions side of the two-show event. Often, it seemed that fewer than 1,000 were on the floor at any given time, many of whom seemed to be general computing enthusiasts drummed up with a flood of free tickets. *OS/2 Professional* estimated there were less than 750 OS/2 users in evidence throughout.

The Software Developer portion of the two-headed gathering, seemed to attract more crowds, and several exhibitors expressed satisfaction with their half. However, not a few OS/2 vendors questioned the viability of the Business Software Solutions half and expressed doubt about participating in the March 1994 edition to be held in San Jose.

Bored exhibitors tried to distract themselves with a variety of activities, from flying balsa wood airplanes, to driving remote controlled cars, to reliving old fishing trips, to sharpening OS/2 skills at the IBM Test Drive Center. A key problem was what to do with an abundance of unused paraphernalia not distributed. The trash cans were brimming with printed matter.

continued on page 17

Create GUI Applications That Deliver The Promise Of OS/2.



YOUR WAIT IS OVER!

Now there's a graphical development and decision support system that combines unparalleled data access and reporting with the stability and multitasking power of OS/2 2.0. It's called PM/FOCUS from Information Builders, a leader in application development tools for almost every environment.

EXPERIENCE OUR EASE AND SPEED

PM/FOCUS offers a rich graphical toolset for fast, easy application development with a minimum of coding. All application components, including databases, procedures and forms become simple graphical objects that can be

INTRODUCING PM/FOCUS

controlled by mouse-driven "drag and drop."

Built-in list boxes, check boxes, radio buttons, type fonts and other graphical tools allow you to create attractive GUIs that are so intuitive, they're a snap for even the most unsophisticated end users.

POWERFUL REPORTING FEATURES

PM/FOCUS offers the most powerful reporting language of any product on the market today. And building reports is a breeze. You simply

transform database fields, record selections, and report headings and footers into selectable objects. Even complex sorts are available at the touch of your mouse.

DELIVER GREAT OS/2 GUIs

Get the promise of OS/2 now. Make PM/FOCUS your corporate standard for sensational GUI application development. For more information, or to attend a free seminar...

Call 800-969-INFO
In Canada call 416-364-2760

IBI PM/FOCUS
Information Builders, Inc.

Application Catch-Up

BY WILLIAM F. ZACHMANN

The number and range of native OS/2 2.1 32-bit applications, though certainly growing, nevertheless remains undeniably much smaller than that of DOS or of Windows applications. Not only are there fewer OS/2 applications presently available than there are, say, Windows 3.1 applications, but in many cases the current OS/2 version of a popular application also has less features and is functionally less up-to-date than the current Windows version of the same application.

Critics and foes of OS/2 have recently made the relative lack of native 32-bit OS/2 applications a major focus of their criticism. Even though, they say, OS/2 2.1 may temporarily gain acceptance as a desktop operating system, that means nothing in the long run since few application vendors make it their primary target for application development. Critics claim OS/2 2.1 will be rendered obsolete well before there is a critical mass of OS/2 applications, because OS/2 runs existing DOS and Windows applications, eliminating any real incentive to develop 32-bit OS/2 versions. Eventually, critics say, users will move on to Microsoft's NT Lite (also known as "Chicago" or "Windows 4.0") or to Taligent's new object-oriented operating system.

They're wrong. The role of native OS/2 applications is, in my view, one of the most thoroughly misunderstood and misinterpreted aspects of OS/2 and of its strengths and weakness in the "Operating System Wars of the Early '90s." To understand better the role of OS/2 applications is to understand better what OS/2's future prospects really are and why they are much better than its critics assume them to be.

The situation with regard to native, OS/2 applications is much better than OS/2's critics imply. True, there aren't as many OS/2 apps as there are Windows apps and true, in some cases the OS/2

versions are behind the Windows versions. Still, products like DeScribe, (the soon to be released) Ami Pro, and WordPerfect 5.2 for OS/2 are no slouches in their own right. Innovative products that fully exploit OS/2 2.1's WorkPlace Shell such as Lotus' cc:Mail for OS/2 WPS are starting to appear. These are well ahead of the functionality and usability of DOS and Windows versions.

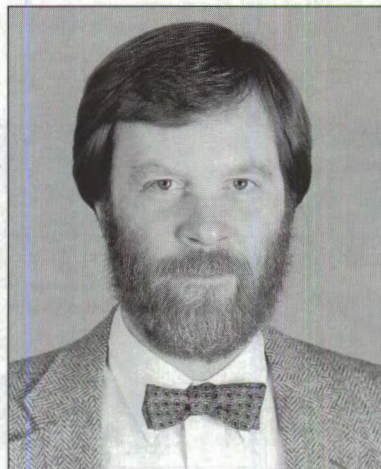
So, why, if there aren't a lot of OS/2 applications already available, are so many users switching to OS/2? The answer to that is

really quite simple: OS/2 2.1 provides a large number of DOS and DOS/Windows users with a better environment to run the applications they already have. It really is a "better DOS than DOS" and a "better Windows than Windows" for at least a substantial proportion of DOS and Windows users.

For although the "common wisdom" (which is far more common than wise) says that it is applications that make a new operating system successful, the reality is otherwise. Windows proved that by selling well once it finally provided a reasonable DOS GUI shell, memory man-

ager, and task switcher with the release of Windows 3.0 in early 1990, even though the selection of Windows applications was still quite limited. OS/2 2.1 is doing well because a large and growing number of users are discovering that it provides a much better way to run their existing DOS and Windows applications than do DOS and Windows.

To provide a better way to run existing applications is important for the initial acceptance of OS/2, but it is really only of transitional importance. Once users start to use that new platform, they also start to become interested in native applications for it. Demand for such applications lags sales of the platform itself, but creates a healthy market once it starts to catch up.



ZACHMANN'S VIEW

With Windows 3.0/3.1, Windows applications sales remained quite modest in 1990 and only gradually improved through 1991. It was not until 1992, nearly two years after the release of Windows 3.0 (the first really successful version) that Windows application sales really started to pick up a full head of steam.

A virtually identical pattern is developing with OS/2. We are just beginning to see a significant range of native OS/2 applications in the marketplace. As the first real successes in OS/2 applications are just getting underway. More will follow.

That brings us to the final objection from OS/2's critics: the claim that before OS/2 application sales reach a critical point, OS/2 will be replaced by an alternative such as NT or Taligent. Why bother writing to an API that will soon be obsolete anyway?

The simple answer is that it won't be. NT is no threat to OS/2 on the desktop. NT Lite (a.k.a. "Chicago" or "Windows 4.0") is little more than vaporware that reiterates the promises Microsoft originally made for Windows NT and then failed to

deliver. As one wag referring to Windows NT put it, "it just gets beta and beta."

The last resort of the anti-OS/2 folks is to claim that the Taligent venture will soon torpedo OS/2. Since this will be, they say, a totally new object oriented operating system with no relation to OS/2, OS/2 will be dumped once the Taligent OS is ready. Taligent, in fact, is building on the same Mach-3 kernel foundation that provides the basis for IBM's future "portable" version of OS/2 that will also run on non-Intel processors: WorkPlace OS. What's more, the object oriented capabilities being developed by Taligent will first appear as enhancements to the existing object oriented capabilities of OS/2's WorkPlace Shell.

We'll dig into the specifics of IBM's future operating system directions and the likely outcomes in much more detail in this column in the next issue. The bottom line is that there will not only be plenty of time for OS/2 applications to build critical mass, but that such applications will leave traditional DOS and Windows applications far behind in both function and usability. ♦

Do these quotes sound familiar?

"It doesn't crash in the debugger!"

"I can't reproduce it!"

"Why does WinDefWindowProc generate an error?"

"Exactly, what did you do?"

"Where should I put WinGetLastError?"

"It must be a configuration problem!"

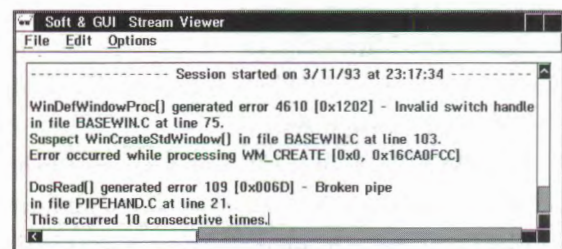
Introducing the API Debugger which gives Answers, not Guesses

Error Manager

32-bit
Version 2.0
for OS/2 2.X

Include 1 header file.
Link 1 DLL.
Set 1 environment variable.

- Finds intermittent errors without the Debug Kernel.
- Logs messages to a file, pipe or our PM viewer.
- Works with optimized code in realtime situations.
- Notifies your window procedure or callback function
- Supports both PM and Fullscreen programs
- Enables event-driven error handling
- Invaluable for Debug, QA Test and Production cycles



Includes a PM Viewer,
Pointer Validity API and a
Free copy of Command Line

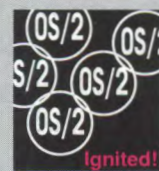
\$225



Soft & GUI

2224 East 21st Street
Brooklyn, New York 11229

(718) 769-8017



BYTES & PIECES

continued from page 13

"This show is poor," commented Joseph Elad, president of Quantum Leap, an ISV at the OS/2 pavilion. "They said we would meet business people. I did not meet any business people, mostly just developers. It wasn't worth my investment and I won't be back."

Undaunted, Miller-Free-man announced Business Software Solutions dates for the next two years.

A fun sidelight at the Boston show was the WordPerfect for OS/2 demonstrations by sometime Elvis impersonator and full-time WordPerfect OS/2 supporter Troy Monney. Troy, by the

way, looks the part and will go into the Presley persona on request. For sure, with as little attendance as there was at Business Software Solutions, Troy could have easily crooned those everlastin' Elvis lyrics: "I'm so lonely, I could die."

Edwin Black

Lessons from the clutch

I'd like to see the mouse, mouse pad, and keyboard sent off to a special computer museum with a sign that reads, "Historical objects, please do not touch!" These devices, their physical requirements, and the skills required

continued on page 39

ATS

Advanced Task Scheduler for OS/2 Version 2.0

- ✓ Create true job streams.
- ✓ Programs can be scheduled to run anytime.
- ✓ Programs can be dependent upon files, other programs, holiday schedules, external signals.
- ✓ Complete logging—to file and window.
- ✓ Window display of running tasks.
- ✓ Window display of holidays, events and tasks.
- ✓ Programming interface for external signals.
- ✓ Introductory price: \$249.99.

*Volume Discounts Available
Site Licenses Available*

MHR

Software and Consulting
2227 U.S. Highway #1 * North Brunswick, NJ 08902

(908) 821-0359

Circle #92

Looking for an OS/2 Backup Solution?

I'm the PCX Wizard
and promise you won't be
sorry if you try my ...



OS/2 BackupWiz

OS/2 BackupWiz is the SCSI tape backup solution you have been looking for! Designed to exploit OS/2's multiple threading, BackupWiz gives you a quick and reliable method to completely back up your OS/2 system. HPFS and FAT file systems are supported and Extended Attributes, Long File Names, System files, and the Workplace Shell are backed up. You can even restore your entire OS/2 boot volume from tape!

Ease of use is another of OS/2 BackupWiz's strong points. A simple, character oriented interface allows for easy file selection on both backup and restore. No more complicated and awkward menu structures to navigate.

OS/2 BackupWiz comes with support for most 1/4", 4mm (DAT), and 8mm tape devices. Any SCSI host adapter that has an ADD driver can be used with OS/2 BackupWiz.

PCX also works hard to keep you satisfied after the sale with outstanding customer support. Being a small and aggressive company means that we can respond to your needs that much quicker. When new tape drives become available, PCX adds support for them in a matter of weeks, not months.

OS/2 BackupWiz is priced at \$189. If you act quickly, you can take advantage of our special offer and buy OS/2 BackupWiz now for only \$129. We offer a 30 day money back guarantee to protect you in case OS/2 BackupWiz does not work for you! Call our toll free number and order today!

PCX

THE PC EXPERTS



1-800-800-4-PCX

3525 Del Mar Heights Road • Suite 313 • San Diego, CA 92130 • (619) 259-9797 • (619) 481-6474 FAX



GRASSROOTS POWER

How IBM Nurtures User Groups and SIGs

Moving beyond its traditional focus on corporate users, Big Blue is now paying closer attention to user groups. Here's how you benefit.

BY RICH MALLOY

A large hotel in downtown Houston. Standing Room Only: wall-to-wall people, 1,300 strong. The event: the June meeting of HAL-PC, the Houston Area League of PC users, the second-largest user group in the U.S. The reason for the crowd? A "shootout" between Windows NT and OS/2.

The demos couldn't have been more different—and more ironic, given the reputations of the two companies. Most of the NT presentation was taken up with a 30-minute slide show, followed by a short demo of NT's capabilities. The demonstration, according to attendees, focused on the animated cursor.

The OS/2 demo, by comparison, was a lively, animated presentation of the operating system's features. High drama was provided by a device driver conflict that caused a system crash—a seemingly inevitable event at large software demos. But, talking nonstop until his machine recovered, IBM's David Barnes seized the opportunity to show how well OS/2 recovers from such a crash. His quick recovery and never-missed-a-beat patter left some audience members speculating that the crash had been deliberately planned.

Who won the shootout? Let's leave that for later. The important thing now is the emphasis that globally configured IBM had placed on this strictly local presentation. Indeed, the special place in Big Blue's strategy for user groups is being reflected not only in Houston but around the world.

Face-to-Face

PC user groups are one of the best developments in the computer industry. Put simply, a user group is a gathering of computer

SPECIAL REPORT



Photo: Bill Miller. The Minnesota OS/2 User Group celebrates the operating system's first birthday.

users dedicated to helping each other. Yes, magazines abound and the electronic data highways are increasingly well traveled—but there is no substitute for good old-fashioned face-to-face meetings with fellow humans.

Today, there are hundreds of user groups in the U.S. alone, with more starting each month. The Association of PC User Groups (APCUG) is composed of 350 member groups.

Practically every large urban area has a PC user group. Most groups are large enough to have a number of subgroups or special interest groups (SIGs) that focus on specific areas of the computer industry. And it is more and more common these days to find one of these SIGs dedicated to OS/2.

OS/2 observers estimate some 150-200 OS/2-based user groups exist worldwide—a number that has doubled since version 2.0's release. No one knows the exact number of OS/2 SIGs or user groups, or how many members they represent. According to Kathy Fanning of IBM's user group relations department in Austin, "The number is increasing constantly. I am learning about new groups every day. Trying to count the number of OS/2 SIG members is like trying to count drops in the ocean. Nobody knows."

The largest, and perhaps oldest, user group is the Boston Computer Society. Each month, the BCS hosts a large general meeting as well as smaller gatherings for each of its subgroups. At the large meetings, a software vendor will usually stop by to promote a new product; industry analysts also regularly present their views.

For example, the BCS recently hosted a panel of magazine editors that featured *OS/2 Professional's* own Edwin Black.

One of the BCS SIGs, the Boston OS/2 User Group, meets once monthly at an IBM facility in downtown Boston. An average of 100 people attend each meeting. As is the case with the large general meetings, software vendors usually take the chance to promote new products. Lotus Development, located just over the Charles River from the meeting place, often uses the group to showcase new products and works in progress.

Not surprisingly, many of the people who attend these meetings are more than interested in computers—they're devoted to them. If a member of the SIG has a problem, the other members seem to go out of their way to help out. To that end, a regular part of many group meetings is a session during which people with specific problems or questions can address the group as a whole. Usually someone in the group volunteers an answer, a suggestion, or an idea.

Ever since Wozniak and Jobs began selling their Apple I kits to the Homebrew Computer Club in 1975, savvy companies have recognized that user groups offer an unparalleled opportunity to expose their products to the influential early adopters of the industry. In fact, it is now common for major manufacturers to introduce new products not at lavish press conferences, but at lavish user group meetings. And now, to help drown out the marketing blitz being waged by Microsoft, IBM is jumping on the user group bandwagon.

Now's

Introducing
Version 2.1



The new OS/2® 2.1 lets you run the latest Windows™ 3.1 applications, in addition to the DOS, Windows and OS/2 applications

you're already running—almost any application in the PC universe. Now we've added TrueType fonts, select Windows applets, File Manager and Windows 3.1 printer and display driver support, including 32-bit seamless SVGA support.

You'll also get Advanced Power Management (APM) support for portables, improved multimedia support, pen-based capabilities, CD-ROM and AS/400® terminal emulation support. Plus all the features that made Version 2.0 an award-winner, like true pre-emptive multitasking, OS/2 Crash Protection™ and the easy-to-use object-oriented Workplace Shell™ interface. But now, you also get a new world of possibilities.

to run

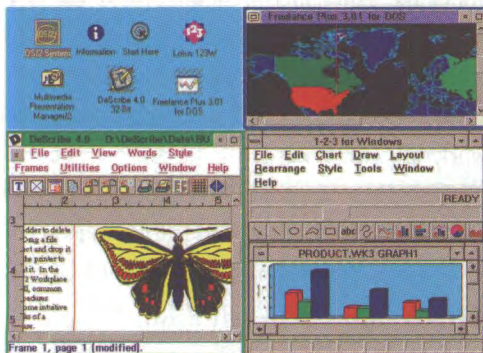
OS/2 2.1 is now also available on a single CD-ROM. It comes with exciting multimedia samplers, full-motion video demos and more. With our free demo diskette, you can find out even more about all the powerful



Call for your
free demo
diskette.

**Demand OS/2 2.1 preloaded
on your next PC.**

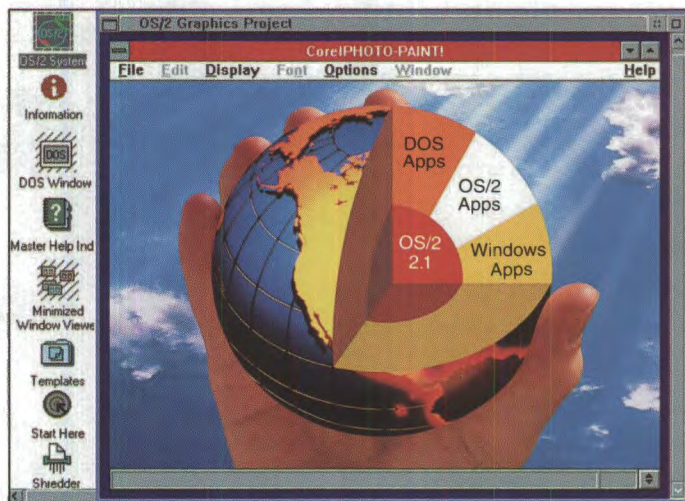
features OS/2 2.1 has to offer. For your copy, to find out more about OS/2 2.1, or to order, call 1 800 3-IBM-OS2. In Canada,



There's no need to buy DOS and Windows to run DOS and Windows applications.

IBM, AS/400 and OS/2 are registered trademarks and OS/2 Crash Protection, Workplace Shell and "Operate at a higher level" are trademarks of International Business Machines Corporation. Windows is a trademark of Microsoft Corporation. TrueType is a trademark of Apple Computer, Inc. ©1993 IBM Corp.

your chance



With OS/2 2.1 at the heart of your PC, you can run a world of DOS, Windows and OS/2 applications.

call 1 800 465-7999. OS/2 2.1 is also available at your local software dealer.

Operate at a higher level.™

the world.



SPECIAL REPORT

Part of the reason for this new emphasis on user groups is what IBM sees as a shift in market patterns. In the past, people used computer products at their offices and later brought them home. Now, according to IBM's Bill Wyatt, a key liaison to OS/2 user groups, people are beginning to use products at home first and then bring them into the office.

Another factor in this change is the operating system itself. OS/2 is demo-genic: IBM has difficulty conveying the value of OS/2 through advertising, but in a demo, the software speaks for itself. Only by double-clicking on the icons and running traditional DOS applications, Windows 3.1 programs, and native 32-bit OS/2 software—all simultaneously—can people experience the power of OS/2.

Wyatt says whenever he demos the product, "The reaction is phenomenal." Indeed, IBM's best sales tool is probably its array of energetic on-site demos, dubbed OS/2 Live, OS/2 Road Show, or OS/2 on Tour. Sound like a rock music tour? That's not accidental. Some versions, for example, have included live musicians and giant screen displays.

IBM's focus on user groups is just part of a larger effort centered on increasing grassroots support. The company has also instituted Team OS/2, an organization of IBM employees and volunteers united by electronic mail and dedicated to evangelizing OS/2.

IBM has discovered that one of the bonuses of working with user group members is their dedication. According to Fanning, "Some people in user groups are working harder than a lot of IBMers to ensure OS/2's success. They dedicate their hearts, minds and money to its success." (Hearing this, one wonders if IBM might not be better off by replacing some of its departments with all-volunteer staffs.)

Birthday Cakes and Fireworks

SIGS are certainly supporting IBM and OS/2. How does IBM support user groups? In a word, unevenly.

Big Blue certainly does help with the basics. Anyone wishing to start a group can request from IBM a "starter kit" — a document that offers helpful hints on finances, where to hold a meeting, and how to set up a software library. Additionally, a local IBM office may allow the group to use its meeting space if a company employee is willing to handle security and cleanup on his or her own time. The OS/2 SIG of the New York PC Users Group, for example, regularly uses IBM's posh midtown Manhattan offices.

IBM notifies groups of new products or events. If asked, the company will arrange for IBM speakers and even help with logistics for non-IBM speakers.

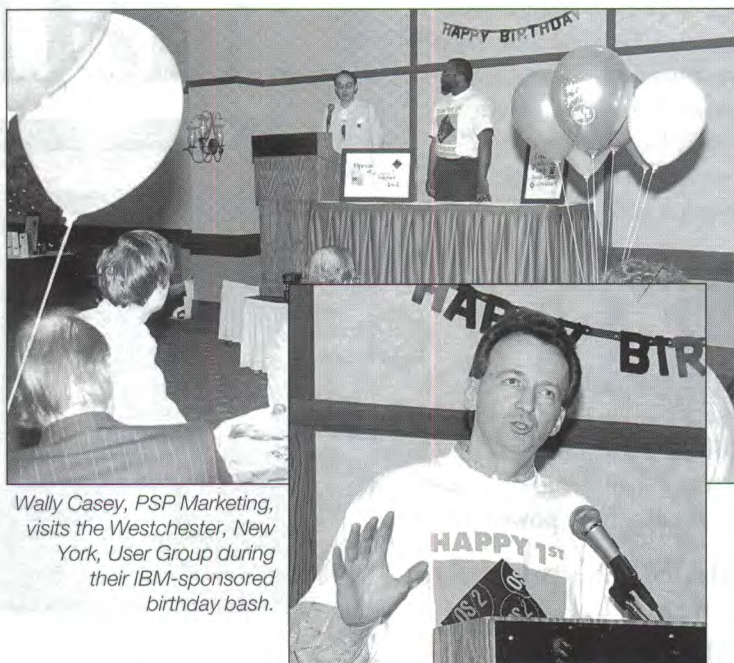
At large trade shows such as COMDEX, the company sets up banks of OS/2 machines so that user group members can learn more about the operating system. Sometimes the company sends out free packages of OS/2 "trinkets and trash" — tee-shirts and mouse pads — that the local user groups can auction off or use as door prizes.

Occasionally IBM's support for user groups rises to epic heights. To

celebrate the first birthday of OS/2 2.0, for example, IBM decided to have birthday cake. And since it couldn't move the worldwide network of OS/2 users to a single mountainous cake, IBM set out instead to bring the cake to the users—essentially hosting a network of virtual parties. The word was put out on bulletin boards and networks all over: You supply the time, the place and the people, and IBM will come up with the fixin's. Through the bakery equivalent of FTD, IBM delivered birthday cakes and balloons to more than 100 user groups and SIGs around the globe.

Onslaught of Information

How effective is IBM's user group program? Janet Gobeille, one of IBM's grassroots marketers, says it's impossible to quantify user group input or judge the effect on product development. But IBM's efforts have been noted. Bart Delaney, president of the



Wally Casey, PSP Marketing, visits the Westchester, New York, User Group during their IBM-sponsored birthday bash.

How to Relish

If you hunger for a truly innovative time and information organizer, here's something worth savoring. It's called Relish®—an amazingly intuitive calendar, reminder and personal scheduling system that utilizes the power of OS/2® to meet your time management needs.

Designed specifically for OS/2, Relish 32-bit makes extensive use of advanced Workplace Shell™

every

features. Reschedule an appointment by dragging it and dropping it on a new date or time. Drag and drop from the Note palette to create new entries. Drag and drop from the OS/2 Colors and Fonts palettes to customize Relish. Print the schedule for any day just by dragging the date to the printer object. It's

quick and easy—even fun.

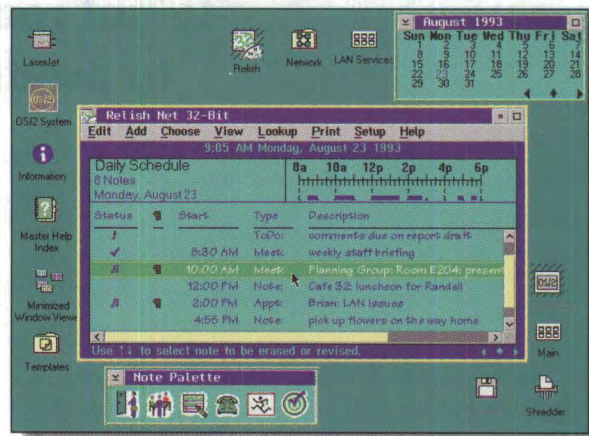
To whet your appetite even more,

of your



there's a full course of other time-saving features. Reminders

pop onto your desktop and allow you to make changes without returning to Relish. A program scheduler lets you launch other applications on time. And with Relish's desktop calendar, you just click your mouse to view or change any day's schedule—even when Relish is hidden. And if



Spread Relish Net over your LAN to keep your entire workgroup up to date.

moment

you're on a LAN, Relish Net can keep your entire workgroup up to date.

When you see how easy managing your time can be, you'll approach the day with Relish. To order or to find out more about OS/2 2.1 or Relish, call 1 800 3-IBM-OS2. In Canada, call 1 800 465-7999.

Operate at a higher level™

day.

IBM and OS/2 are registered trademarks and Workplace Shell and "Operate at a higher level" are trademarks of International Business Machines Corporation. Relish is a registered trademark of Sundial Systems Corporation, 909 Electric Avenue, Suite 204, Seal Beach, CA 90740. ©1993 IBM Corp.



IBM is not alone in recognizing the value of user groups. Software developers often visit local OS/2 user groups to get reactions to products.

large NYPC group in New York City, says he has seen an onslaught of information on OS/2 from IBM this year. Says Delaney, "They seem to be going out of their way for us."

William Zack, president of the OS/2 SIG of NYPC, agrees. IBM arranged to premiere the introduction of both versions 2.0 and 2.1 of OS/2 at the OS/2 SIG meetings. The company also helps book speakers for meetings (which draw 50-150 people) and sends a small number of software packages and books to raffle off during the meeting.

The Westchester OS/2 User Group is arguably the nation's most visible IBM-product SIG because of its proximity to OS/2's former headquarters at IBM's Somers, New York office. Although IBM has now moved OS/2 headquarters to Austin, Texas, the Westchester group, according to its president, Craig Smith, is still very important to Big Blue. At one recent meeting, IBM's OS/2 Head Honcho, Lee Reiswig showed up to share his thinking on strategies and directions for OS/2.

Loose Feedback Loops

All is not completely rosy in Big Blue's relationship with its network of user groups, however. One advantage of close ties to user groups is the chance to gather valuable feedback. But while IBM acknowledges the value of this feedback, the company does not yet have a specific mechanism for handling it. Toby Pennycuff, who heads the Dallas/Fort Worth OS/2 User Group in Arlington, Texas, says that IBM doesn't always listen to advice that emerges from his group.

"I have been pushing OS/2 for a long time," says Pennycuff. "I have staked my professional reputation on its success, and want to see it succeed despite a less than stellar marketing program that IBM has in place." He argues that grassroots support is more responsible for OS/2's recent gains than any other factor, and he also feels that IBM can be arrogant in its treatment of those who champion the system.

Another source of user criticism is the Pasadena IBM Users Group. Steve Bass, president of the group and a founding member of APCUG, says that he wishes that IBM could give him

more help. He points out that no IBM employees are members of the group, but that the local representatives from Borland, Lotus, and Microsoft are all active members and give monthly updates about new products. Also, while an IBM rep did give a demonstration of OS/2 about a year ago, it was not very well done, according to Bass. By contrast, Lotus demonstrated 1-2-3, release 4 for Windows and sold copies of the software for \$49—a very popular

move. The Pasadena group has no OS/2 SIG yet, but would like help from IBM to start one.

It is because IBM values OS/2 SIGs and their ability to dramatically affect user loyalty and opinion that the SIGs themselves have been the backdrops of some rather dramatic clashes. For example, there was the case of Patrick Pearce. Pearce is chairman and CEO of the Westchester, New York SIG and was quite active during the heyday of the nearby Somers OS/2 office. He was featured prominently in OS/2 national print advertising. But he grew tired of what he characterized as IBM's ineptitude in marketing the OS and the damage it was causing developers, crossed the line and became a leader of last spring's ISV revolt. The so-called "revolt" saw a loose amalgam of developers try to "buy" OS/2 from IBM—this to save the operating system from what they viewed as continued marketing incompetence. Pearce's negative comments to such publications as *PC Week* and *OS/2 Professional* caused major heartburn for Big Blue—precisely because it relied on Pearce and the SIG for goodwill.

Pennycuff, Bass, Pearce and many others say IBM would do well to pay more attention to the voices of SIG members. But IBM hasn't as yet. For instance, several members visited local computer stores on their own time, with their own machines, demonstrating what the system could do for "real" people. The visits worked well, and Pennycuff thought a similar process should be instituted on a larger scale.

"We suggested that they (IBM) organize and promote resources where people can show the applications directly to other people," he said. "It was met with a resounding silence."

Yet someone somewhere in Big Blue is indeed listening: The



This

It's a modern masterpiece. CorelDRAW 2.5 for OS/2® provides full-featured illustration, chart and photo-paint capabilities all in one package. It's a complete graphics solution for OS/2.

CorelDRAW

Allow us to illustrate our point.

To make the most of OS/2, CorelDRAW went back to the drawing board to capitalize on OS/2's multithreading capabilities. Now it runs up to 25% faster than previous



Draw on the 32-bit power of CorelDRAW and OS/2 to create dazzling illustrations.

of art.



versions—the ultimate quick draw. You can create effective slides, flyers, brochures, newsletters, creative designs and technical illustrations with incredible speed. And in the drag

and drop world of the Workplace Shell™ you can do it all with amazing ease.

Instead of painting you into a corner, CorelDRAW 2.5 comes with an entire suite of applications to fill all your graphics needs:

CorelCHART, CorelMOSAIC, CorelTRACE and CorelPHOTO-PAINT, along with CorelDRAW. Five powerful applications plus a bonus CD-ROM disk with over 12,000 clip art images and symbols and over 250 fonts. There's also a comprehensive tutorial videotape.

CorelDRAW and OS/2 offer you so many powerful possibilities, we couldn't possibly list them all. Besides, we'd rather you draw your own conclusions.

is a work

To order or to find out more about OS/2 2.1 or CorelDRAW 2.5 for OS/2, call 1 800 3-IBM-OS2. In Canada, call 1 800 465-7999.

Operate at a higher level.™



IBM and OS/2 are registered trademarks and Workplace Shell and "Operate at a higher level" are trademarks of International Business Machines Corporation. © 1993 IBM Corp.

How to Find a User Group

Looking for a user group in your area? The simplest and fastest way to find one is to call the automated User Group Locator at (914) 876-6678 which is maintained by the Association of PC User Groups. Supported by Symantec and WordPerfect, this telephone system offers recorded information about 350 North American user groups. The database can be queried by area code, state, or zip code.

IBM also maintains a database of user groups, but you'll have to send a letter or an e-mail message via the Internet to IBM User Group Relations asking for specific information. The Internet address for your query is ibmpcug@vnet.ibm.com; U.S. mail goes to P.O. Box 201449, Austin, TX 78720-1449.

With new groups sprouting up all the time, both the APCUG and the IBM databases may be a bit out of date. You can find a list of new user groups each month in the back of *Computer Shopper*.

If there is no OS/2 group or SIG in your area, perhaps you should set one up. Contact IBM at the above addresses for information on how to begin.

When you go to a user meeting, take a hint: Don't be shy. If you have a problem or a question, let people know. Most of your fellow attendees will be eager to help. No question is too inane; no problem too simple.

And if the group has helped you, be sure to help it back. Pass the word about the group to your friends and coworkers. Most groups are low budget operations with no advertising dollars. The groups subsist only by word of mouth. And if you can help in other ways, be sure to volunteer. Groups are run by a small number of overworked people who can always use a helping hand.



User Group Locator at (914) 876-6678

company recently set up a program whereby volunteers—most of them non-IBM employees—will set up demos at CompUSA retail outlets throughout the U.S. to spread the good word about OS/2.

One of those who may be cocking an ear to the grassroots rumblings is Bill Rich, general manager for worldwide marketing operations for IBM's Personal Software Products division and the company's top OS/2 marketing decision-maker. "With a product in as many markets as OS/2 is, we get lots of feedback," notes Rich. "We need to prioritize that feedback. We view the input we get from the OS/2 SIGs as an especially valued feedback."

Beyond Blue

IBM is not alone in recognizing the value of user groups. Software developers often visit local OS/2 user groups to get reactions to products. For example, in Toronto, compiler-publisher Watcom recently visited the Corporate OS/2 Focus Group to show off its new Visual REXX product. And WordPerfect recently dispatched a top marketing official to the OS/2 SIG of the NYPCUG to demo WordPerfect for OS/2.

One OS/2 company that seems to be taking good advantage of user groups is Lotus. At a recent Boston OS/2 User Group meeting, Lotus showed off early versions of some of its 32-bit OS/2 applications. The company did likewise at the Westchester OS/2 User Group.

But the relatively small size of most OS/2 groups meetings keeps some smaller manufacturers away. "We are doing more and more user group demonstrations," said Allen Katzen, president of DeScribe. "We are getting a lot of requests, and if we had the resources we'd do every one that we could. But OS/2 SIGs are still really small. When the main PC user groups start taking OS/2 seriously and allowing us in to demonstrate our product we will start to see a real difference."

The future looks very bright for OS/2. Since the June meeting in Houston, attendance at HAL-PC's OS/2 SIG has tripled. Also, a post-meeting poll showed that about half the 1,300 attendees wanted to buy OS/2 right away.

How many raised their hands in favor of NT? Only about five. ♦

Rich Malloy, OS/2 Professional's senior contributing editor, was formerly the Executive Editor of Byte Magazine. Charles Bermant and Edwin Black contributed to this article.

DB2/2



IBM hits a high-tech home run. IBM DATABASE 2™ OS/2® (DB2/2™) brings big league power and reliability to your mission-critical data.

It's a new 32-bit OS/2 relational database for your desktop and client/server LAN workstations.

Covers

With OS/2 2.1 as a power base, DB2/2 provides an industrial-strength relational database server that supports functions critical to database users—transaction management, concurrency control, security, integrity and solid recovery functions. DB2/2 exploits the power and open architecture of OS/2. It supports industry-standard SQL and provides DB2 compatibility, allowing development of more portable database applications.

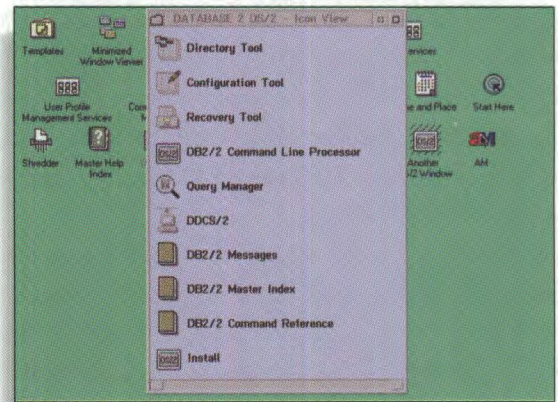
DB2/2 takes a big lead in bringing more versatility to the entire enterprise. You can access DB2/2 data directly from your DOS, Windows™ or OS/2 desktops. For even more enterprise-wide information access, these same database clients can also access IBM DB2®, SQL/DS™ and OS/400®

all

the

databases by installing the DISTRIBUTED DATABASE CONNECTION SERVICES/2™ (DDCS/2) gateway on top of the DB2/2 database servers.

DB2/2 and DDCS/2 deliver the advanced, database functions you'd expect from IBM Programming Systems, the people who invented relational database technology. So you know you're getting a reliable database solution that puts your business first, second and



You can strike up the incredible power of DB2/2 right from the OS/2 Workplace Shell.™

third. To order or upgrade, or to find out more about OS/2 2.1 or DB2/2, call 1 800 3-IBM-OS2. In Canada, call 1 800 465-7999, ext. 850.

Operate at a higher level.™ bases.

IBM, OS/2, DB2 and OS/400 are registered trademarks and Workplace Shell, IBM DATABASE 2, DB2/2, DISTRIBUTED DATABASE CONNECTION SERVICES/2, SQL/DS and "Operate at a higher level" are trademarks of International Business Machines Corporation. Windows is a trademark of Microsoft Corporation. © 1993 IBM Corp.

Hard Up for Hard Disk Space?

As operating systems and advanced programs hog more and more megabytes, it won't be long before your drive becomes hard up for space.

Here are some options.

BY MARLENE SEMPLE

Remember just a few years ago when for most people an 80-megabyte hard disk was plenty of storage? That was before the graphical user interface came into its own. Now, the successes of OS/2 2.1 and Windows 3.1 have sent many of us scrambling to add disk capacity without exhausting our budgets with good reason. OS/2 2.1 consumes as much as 50 megabytes of disk space if you install every option. A major graphical application such as Freelance Graphics for OS/2 needs at least 8MB of storage space.

The demand for space only grows. Graphical files (such as screen captures and bitmaps) take a major bite. A file capture of an OS/2 screen, for example, can occupy 25 to 55 kilobytes on your disk. The OS/2 lighthouse bitmap eats up 153KB of storage space. That single 80-megabyte hard disk just isn't going to make it in the graphical world.

So what options do you have for increasing disk space? Two popular options are available to most users: buy another hard disk or use data compression. If you are part of a corporate work group, you may have a third option as well: connect to a local area network.

Adding a new hard disk, whether it's a replacement disk or a second unit, is the cleaner—and costlier—

way to go. At an average cost of about \$1 per megabyte, you'll gain pristine storage space in amounts limited only by your checkbook and the capacity of your power supply.

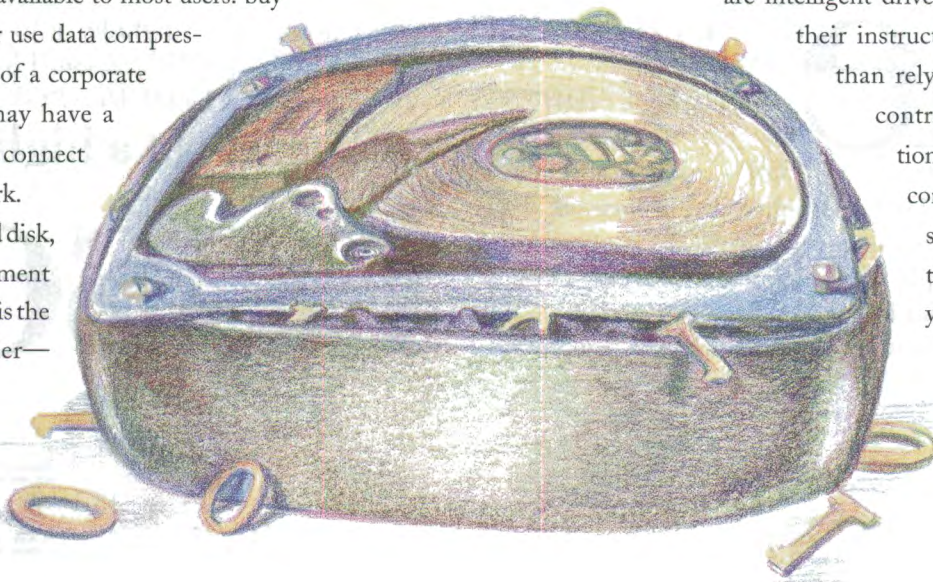
On the other hand, compression is the cost-effective way to gain a moderate increase in disk storage space. The best you'll achieve is a doubling of available storage at a one-time cost of roughly \$125 plus the burdens of what can be a complex installation procedure and having an idiosyncratic file format on your disk.

Selecting a Disk

Should you decide a new hard disk will best satisfy your appetite, you first must decide which type of drive to buy. The three most common types manufactured today are: IDE (Integrated Drive Electronics), SCSI (Small Computer Systems Interface, pronounced "scuzzy"), and ESDI (Enhanced Small Device Interface). Of the three, IDE and SCSI are the more popular. Both

are intelligent drives that handle some of their instructions internally rather than relying on the CPU and controller for every operation. Chances are that your computer will already be set up to handle one of these, which will ease your selection worries.

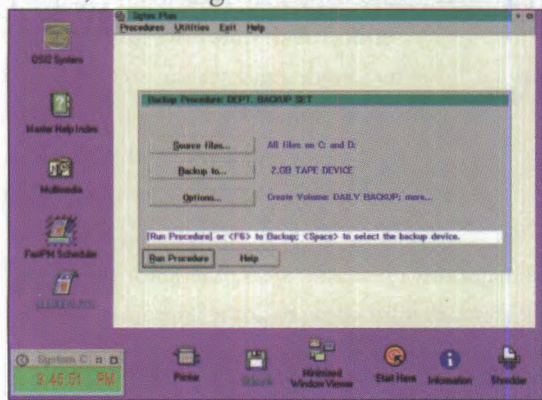
Factors you'll want to





Sytron Plus

All is not lost, OS/2® users. It's Sytron Plus® File Backup Manager for OS/2 to the rescue. Sytron Plus is a complete OS/2 backup solution—a high-performance program capable of handling HPFS files, long pathnames up to 260 characters and Extended Attributes of OS/2 files. And while the performance of Sytron Plus stands alone, its benefits can extend across OS/2 networking environments, including IBM LAN Server.



The intuitive graphical user interface of Sytron Plus is a big plus.

the day even faster.

IBM and OS/2 are registered trademarks and "Operate at a higher level" is a trademark of International Business Machines Corporation. Sytron and Sytron Plus are registered trademarks and Sytron Rebound is a trademark of Sytron Corporation. © 1993 IBM Corp.



backup and recovery

Sytron Plus delivers the broadest support for the industry's leading backup devices including diskette, logical device, quarter-inch tape, data cassette,

4mm Digital Audio Tape (DAT), 8mm helical scan and 3½" rewritable optical. For even more complete disaster recovery, there's Sytron Rebound.™ Together with Sytron Plus, Sytron Rebound extends recovery even further, making recovery of the entire OS/2 operating system easier than ever.

save

Sytron Rebound does it unattended and rapidly—in less than 10 minutes.

Nothing helps you bounce back from disaster like Sytron Rebound. And when it comes to OS/2 backup, Sytron Plus is a giant step forward.

To order or to find out more about OS/2 2.1 or Sytron Rebound and Sytron Plus, call 1 800 3-IBM-OS2. In Canada, call 1 800 465-7999.

Operate at a higher level.™



FEATURE

consider include compatibility with your system, storage capacity, speed, usefulness, ease of installation, and price.

With respect to compatibility, most of today's personal computers already have an IDE connector on the motherboard. If your system has built-in support for IDE drives, you can add one of these drives without losing one of your expansion slots to a controller card. In systems that do not support IDE drives, simply install a controller in a free expansion slot.

IDE drives and controllers cost less and are simpler to install than SCSI, but IDE supports only one type of device—hard drives. SCSI controllers, on the other hand, support not only hard drives but other accessories such as CD-ROMs and tape back-up units. So if you plan to add CD-ROM to your system, that might be reason enough to tip your decision in favor of SCSI. Newer types of SCSI drives (called SCSI-2) also have the advantage of transferring data at a significantly higher rate than can IDE drives.

There's another potential disadvantage to IDE: you cannot low-level format an IDE drive. If you try to use a standard utility to format an IDE drive, the drive may become unusable. If formatting is required, you must return the drive to the manufacturer. Low-level formatting, though, is rarely required and, of course, you may still partition and high level format (FDISK and FORMAT) an IDE drive.

So long as you have free slots (or a built-in IDE controller) and an extra drive bay or two, you'll have a broad range of options; if not, your choices may be more limited. Consider the IBM PS/2 Model 70, for example. With only three expansion slots, a proprietary disk controller and one free 3.5-inch floppy drive bay, there isn't much room for expansion.

Sources

Fortunately, some companies such as Sigma Data of New London, New Hampshire, design vertical market add-on products—for example, the QED (Quick Easy Disk) for the Model 70. QED includes an IDE disk drive that you mount internally in the PS/2, a controller card and software that includes drivers for OS/2 and DOS. Street prices range from about \$490 for the 120MB kit to

\$1,295 for the 535MB kit (240MB and 340MB configurations are also available). The QED card replaces the existing controller and the IDE drive slides into the second diskette drive bay. Since very few people need a second 3.5-inch drive, the QED system offers a large gain with very little loss.

Another option is a multifunction adapter that includes a hard disk and fits right into an expansion slot. For example, Kingston Technology of Fountain Valley, California, markets a Micro Channel adapter called the DataCard that includes an 85MB, 127MB or 209MB hard disk along with memory expansion sockets that accept up to 64MB of RAM. Thus, OS/2 users can

increase both memory and drive space while consuming only a single slot. Street prices range from about \$440 to \$725 without RAM installed.

If you have unused drive bays, installing a second hard disk of the same type as the first is usually the simplest option. If the existing drive is an IDE drive, you may need to change jumper settings on the first drive to set it to "master" mode (and set the second drive to "slave" mode). Of course, to do that you first must track down the disk drive installation manual (which may not have shipped with your system). Fortunately,

many of the major drive manufacturers offer automated technical support systems that list or fax back the appropriate settings.

With SCSI drives, you simply set the drive ID (through a switch or jumpers) to a unique value. In many cases, you can set the switch or jumper block without the aid of a manual because it is clearly labeled with markings of 0-7 (the valid ID numbers). Note that one ID (usually 7) is reserved for the SCSI adapter.

Setting Up

After installing the drive, you must configure the system and allocate resources. This may be the most complicated part of the procedure. The setup program, which tells the system which devices have been installed, may be diskette-based; alternately, it may reside in the boot-up code (you'll get a message while booting that says something like, "Press the Del key to configure the system").

Once you have the setup program running, you configure the drive setting by entering parameters such as the number of heads,

**That you will need
more disk storage
is a given; the only
questions are how
soon you'll need it,
and how you get it.**

A seriously souped-up

Fasten your seat belt. Have your keys ready. Then rev up the SAS® System, the world's leading information delivery system. With OS/2® under the hood, the SAS System is ready to shift into high gear.

Take the SAS System for a spin. Start your EIS. Then race through your most demanding decision support challenges. That's when the SAS System really cranks it out. OS/2's 32-bit architecture provides the perfect engine for the industrial strength power and flexibility of SAS software.

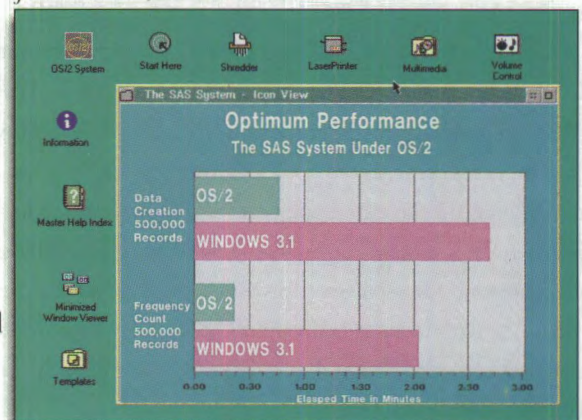
But pedal-to-the-metal performance is only part of the story. Support for OS/2's advanced communication makes for high-speed exchange between the SAS software on your desktop and the SAS System already at work in the data center. You'll get a comprehensive client/server solution that runs across your entire enterprise—sharing data and computer resources in a timely and efficient manner.

When you've got OS/2 driving the SAS System, you can be sure you're heading in the right direction. To order or to find out more about OS/2 2.1 or the SAS System, call 1 800 3-IBM-OS2. In Canada, call 1 800 465-7999.

Operate at a higher level.™



In a data record creation test, the SAS System went from 0 to 500,000 in 46 seconds.



System.

IBM and OS/2 are registered trademarks and "Operate at a higher level" is a trademark of International Business Machines Corporation. SAS is a registered trademark of SAS Institute Inc., Cary, NC. ©1993 IBM Corp.



FEATURE

cylinders and sectors (all listed in the drive documentation or available from the manufacturer). Some systems allow custom settings; in others you must find a setting that comes close to the actual drive specifications. Many SCSI controllers simply require that you set the drive type to "0" and let the SCSI controller's onboard processor handle disk I/O.

Finally, you must partition and format the drive. A partition is a logical division of the hard disk—the operating system will read each section as a separate disk. Many savvy OS/2 users create at least two partitions on the first drive: one for the operating system and the other for applications and data. This configuration allows you to reformat the operating system partition without losing your data and programs. You could create two more partitions for Boot Manager and a dedicated DOS boot drive, if desired.

Unless you have special requirements (such as both HPFS and FAT formats) you should probably configure a secondary drive with one large partition to simplify disk management. The fewer partitions you have, the less you will juggle data from one drive to another as one partition gets full.

The choice between FAT and HPFS is made at format time: `FORMAT D:` for FAT and `FORMAT D: /FS:HPFS` for HPFS. In general, we recommend HPFS over FAT. However, if you must retain access to your disk through DOS (Dual Boot, Boot Manager or an emergency DOS boot diskette), you should stick with FAT. For example, if you're still using DOS-based sector editing and file recovery tools you should either use the FAT format or upgrade to an equivalent OS/2 utility that works with HPFS such as GammaTech from GammaTech, Inc. of Edmond, Oklahoma.

The Big Squeeze

Many users find the task of adding a second drive daunting. If you fall into this camp, you should consider data compression software such as Stacker for OS/2 and DOS (from Stac Electronics of Carlsbad, California) or DCF/2 (from Proportional Software of Fort Collins, Colorado), which carry street prices of about \$140 and \$115, respectively. Both systems can roughly double the stor-

age capacity of a PC running OS/2 2.1. Stacker's greatest advantage is its compatibility with Stacker for DOS. You can continue to dual boot between DOS and OS/2 and retain access to compressed partitions. However, Stacker supports only FAT-formatted partitions, while DCF/2 supports both FAT and HPFS. Proportional has discovered serious problems in OS/2 that significantly effect the reliability of DCF/2 and could even damage data. At press time, those problems were being fixed by IBM, thus allowing DCF/2 to run as reliably as its makers intended. So make sure you purchase only the most recent version of DCF/2.

Recent publicity about problems caused by the DoubleSpace compression feature in MS-DOS 6.0 has led some hardware and

software dealers to warn average PC users to be wary about using compression programs. Skip Johnson, technical support manager for Sigma Data, advises his customers not to use MS-DOS 6.0 for data compression because some clients have reported prob-

lems when using DoubleSpace on their disks. Johnson says, however, that Stacker for Windows and DOS works, adding that he does not expect problems with Stacker for OS/2.

That you will need more disk storage is a given; the only questions are how soon you'll need it, and how you get it. We'd recommend increasing your disk capacity sooner rather than later. (It's not fun to start off-loading applications onto floppies late at night just so you can fit that new animation program or the file containing your kid's latest artistic masterpiece!) And all other things being equal, we'd suggest going for more hard disk space rather than compression: your files will be more quickly accessible, backups will be a bit easier—and you can always add compression later when the next generation of even bigger applications arrives. ♦

Marlene Semple is an OS/2 Professional contributing writer.

Technical Support Numbers for Drive Settings

Fujitsu	800-826-6112.....	touch tone menu
Maxtor.....	800-262-9867.....	touch tone menu
Micropolis.....	818-709-3325.....	operator assisted
Seagate.....	408-438-8222.....	touch tone menu

Welcome

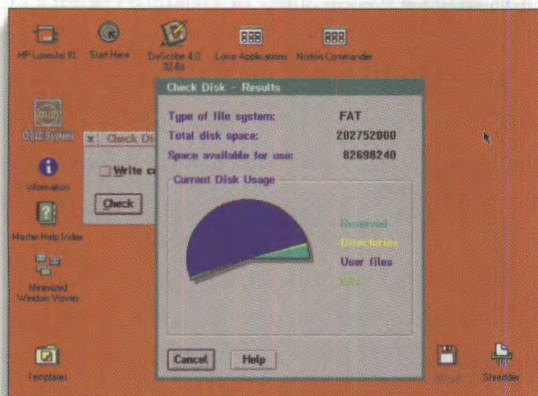
Everyone knows OS/2® gives you more applications to choose from. Now all you need is more space on your hard disk to load them all. Stacker® for OS/2 & DOS is your answer. Stacker lets you quickly and safely double the capacity of your hard disk, so you can take full advantage of OS/2—and virtually any DOS, Windows™ and OS/2 application you want.



You can install Stacker in minutes. With Express or Custom Setup, you can automatically compress the data on the drive or customize the Stacker configuration to fit your needs. And you can be sure your data is safe with the leader in disk expansion technology. In fact, over four million people worldwide already trust their data to patented Stacker LZS™ compression technology.



to the the expanding world



With Stacker, doubling the capacity of your hard disk is as easy as pie.

Stacker fully supports Boot Manager and Dual Boot configurations. And there's full support for OS/2's extended attributes, too. The AutoProtect™ feature detects disk errors at boot-up and immediately protects your Stacker volume. AutoRecovery™ automatically repairs errors on the disk. And Stacker Optimizer™ even defragments a Stacker drive for optimal performance.

With Stacker, you can get the most from your hard drive. And with OS/2 on it, you can get the most from your computer. To order or to find out more about OS/2 2.1 or Stacker for OS/2 & DOS, call 1 800 3-IBM-OS2. In Canada, call 1 800 465-7999.

Operate at a higher level.™ of Stacker.

IBM and OS/2 are registered trademarks and "Operate at a higher level" is a trademark of International Business Machines Corporation. Stac and Stacker are registered trademarks and LZS, AutoProtect, AutoRecovery and Stacker Optimizer are trademarks of Stac Electronics. Windows is a trademark of Microsoft Corporation. © 1993 IBM Corp.





Groping for Groupware for OS/2

There may not be much out there now, but groupware will soon become a major part of OS/2's productivity.

BY WAYNE RASH, JR.

It seems like the perfect group productivity platform. Multi-tasking. Multiple threads. High performance. Built-in networking. Who could ask for more?

The answer, apparently, is the customers. Despite the fact that OS/2 is a nearly ideal platform for groupware, offerings are very slim. In fact, with few exceptions, the offerings are really solutions aimed at DOS and Windows.

One of those exceptions comes from Lotus Development Corporation, where Lotus Notes has supported OS/2 from the beginning. In fact, Notes requires an OS/2-based server as its database platform. But OS/2 clients are also an important part of Notes.

Some other companies do have some sort of groupware product aimed specifically at OS/2. IBM's Time and Place/2, for example, is a group scheduling product that supports both OS/2 and Windows, and requires an OS/2 server running IBM's OS/2 database manager. WordPerfect is readying an OS/2 client for WordPerfect Office, and in the meantime, most of its gateway and server support either requires OS/2 or supports it. In short, there are offerings, and the offerings that exist are quite good, but there aren't very many of them right now.

Oddly enough, Lotus sees this as a problem. "We'd like to see more competition," says Robert V. Hatcher, director of the IBM Alliance for Lotus. "It would expand the market. Users need to be convinced of the technology."

Hatcher thinks that the growing competition in OS/2 groupware products will be good for the industry and good for OS/2. In addition, Hatcher likes the quality of customers he gets. "OS/2 users are more sophisticated than Windows customers," he notes. One thing he hasn't been prepared for is the popularity of his company's OS/2 client. "We're surprised at the popularity of OS/2, especially [version] 2.1," Hatcher says, adding, that satisfied users are "coming out of the woodwork."

The State of Groupware

Right now the only fully-capable groupware solution for OS/2 is

Lotus Notes, but you'd never know that by talking with Lotus. "We try to stay as platform agnostic as we can," Hatcher explains, "we don't think of our products from a platform perspective." In fact, Lotus doesn't really know how many OS/2 client users of Notes there are. Customers receive the DOS, Macintosh and OS/2 client software in every package, and use the clients they need for their installation.

WordPerfect Corporation, meanwhile, is actively entering the OS/2 groupware market. According to Andrew F. Ehat, product manager of WordPerfect Office for OS/2, development of the OS/2 client is well along, and the finished product should be available in the first quarter of 1994. Other WordPerfect Office products for OS/2 are out already. Ehat says that the company's OS/2-based message server is out now, as are several gateway products.

"An OS/2 box is four to five times faster than a DOS box for something like the message server," says Ehat, explaining WordPerfect's interest in getting its server products to market as quickly as possible. Server and gateway products are critical to getting groupware running in a organization, because they are methods that the company uses to link the new groupware system to existing systems. "Downsizing requires more than just e-mail," notes Ehat, "it needs gateways to legacy systems." Ehat said that a company must be able to incorporate all of the functions of the systems it's replacing, including proprietary mail and calendaring systems.

Still, OS/2 servers have been widely accepted for some time. What about the client side that most users see? "The verdict is still out," says Paul F. Smart, Director of WordPerfect Office Development. "We're working on the OS/2 client now, and we have indications that it will be successful," Smart adds.

The Eye of the Developer

One reason WordPerfect likes OS/2 for its servers as well as its soon-to-be-released client is that the company actually

A

Your search for the perfect word processor has ended. Now the world's most preferred word processor is native for OS/2.*



more

perfect

WordPerfect® 5.2 for OS/2 takes advantage of the strengths that separate OS/2 from other operating systems, giving you an object-oriented, easy approach to creating fantastic looking documents.

WordPerfect 5.2 lets you access powerful features right from the Workplace Shell™. The new Automatic Document Detection (ADD) feature registers previous WordPerfect files so they're Workplace Shell enabled. Then just double-click on a data object to open a document—to print, drag and drop a data object onto the printer object. It's that easy. Advanced Workplace Shell integration means increased productivity for you. For example, multithreaded background printing lets you send a document to the printer without tying up your keyboard.

WordPerfect 5.2 for OS/2 looks like other graphical versions of WordPerfect, so more people already know how



to use it. And there's no need to worry about converting old WordPerfect files.*

Other advanced features like Button Bar™, Ruler, QuickFinder, and Grammatik all help make the writing process smoother and more flexible. In fact, this WordPerfect has so many features that exploit our advanced technology, you could say it's a perfect match.

To order or to find out more about OS/2 2.1 or WordPerfect 5.2 for OS/2, call 1 800 3-IBM-OS2. In Canada, call 1 800 465-7999.

Operate at a higher level.™



WordPerfect.

*WordPerfect for DOS, Windows, RS/6000 and VAX files are fully compatible with WordPerfect 5.2. You can also exchange all your AS/400 and IBM 370 files. IBM and OS/2 are registered trademarks and Workplace Shell and "Operate at a higher level" are trademarks of International Business Machines Corporation. WordPerfect is a registered trademark and Button Bar is a trademark of WordPerfect Corporation. © 1993 IBM Corp.



Bonus!
3000+ OS/2
ICONS

PERFORMANCE 2.1

**Use
A Tuning Kit
for
OS/2 2.1**

- Accredited by the IBM I.V. League!
- Recipient OS/2 Software Developer Award!

100 Page Book and 30 REXX Programs

The Book - Best Source of OS/2 Tuning Information!

The Software - Simplifies tuning, improves Performance!
Utilities include: Optimizers to analyze and tune your system; Remove OS/2 features from fixed disk; Measure & report on tuning progress; Create an OS/2 boot diskette; Backup your WorkPlace Shell Desktop; Reset Icon Associations - Plus 3000+ OS/2 Format Icons!

ONLY \$29.95!

3.00 S&H
send Check or M.O. (\$32.95)
VISA, MC & Discover Accepted
or call
(203) 658-1204

Circle #116

CLEAR & SIMPLE, INC. - P.O. Box 130 - W. Simsbury, CT 06092



EVENT CONTROL SERVER

For The Serious Professional

BATCH PROCESSING, JOB SCHEDULING, DISTRIBUTED PROCESSING, PROCESSOR SHARING, MANAGEABLE DOWNSIZING FOUNDATION, EFFICIENT CONTROLLED AUTOMATION, OPEN & CONFIGURABLE, OS/2 & DOS, SECURE, SOLID & PROVEN. LAN Server, NetWare & Standalone Versions.

Vinzant, Inc.



1-800-355-3443

Circle #111

CONNECTIVITY

prefers its programmers to work in OS/2. "It only takes about four hours for a programmer to adjust to OS/2," says Smart. "It's a small learning curve."

Smart also likes the fact that programmers working in OS/2 produce better code. "DOS is very forgiving," Smart explains, "OS/2 is stricter, which is good. We can be assured of successful migration to other environments."

Oddly enough, it might be problems with another operating system that spurs more interest in OS/2's groupware capabilities. Until it was released, one of the greatest problems for OS/2 groupware development was Microsoft's NT. Now that's changed. "In light of the problems with the NT client only being useful at 16 megabytes, OS/2 looks like a more affordable platform," says WordPerfect's Ehat.

The State of Things to Come

So, everyone seems to agree that OS/2 makes a dandy groupware platform. It's already doing duty in the digital trenches by running servers, running gateways and generally doing the less glamorous tasks that keep the system running. Right now, though, you're hard pressed to find a native OS/2 groupware application. The reason seems to be twofold. The first is supply, and the other is demand.

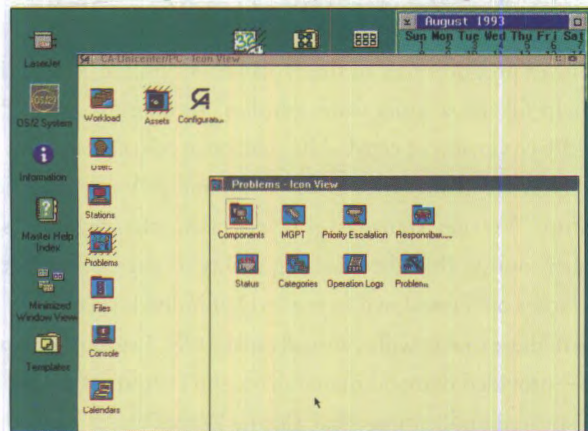
One reason for the paucity of native OS/2 groupware is that Windows groupware packages run so nicely on the OS/2 Windows emulator that there's no pressing need to develop a new one. Since there are lots of nice Windows groupware client packages available, this tends to be all of the groupware anyone needs.

In addition, many OS/2 users have downsized applications from their mainframes. Typically, their mainframes are still around, and in many cases, they are still using PROFS or one of the other group productivity systems that mainframes have supported for years. Since they already have products that perform many of the functions provided by network based groupware, they don't also need a groupware product. Adding to the equation for users of legacy systems is the concern about abandoning users who haven't yet converted to the network. Most companies that have group scheduling and e-mail for example, don't want to create two classes of users.

Solutions to the problem of demand are more amenable to market growth. "Most OS/2 applications are stand-alone," says Ehat. He says that this means that OS/2 users are less likely to be part of a workgroup than DOS users are, and thus are less likely to need group productivity solutions.

Where CA-UNICENTER

When the mission is critical, you can't go soft on stability and reliability. Especially when LANs are at the center of your information processing solution. That's the thinking at the very core of OS/2®. Now Computer Associates adds to those strengths, putting a distributed client/server spin on OS/2 systems management, and



**hard
core
protection.**

There's no need to break out of your shell: the CA-UNICENTER graphical user interface exploits the OS/2 Workplace Shell™

raising it to the level of host environments. Even surpassing them.

CA-UNICENTER for OS/2 builds on the reliability, stability and productivity of mainframe systems management, taking full advantage of the expertise and technology gained from more than 15 years experience. It combines industrial strength security management, work load management, prob-

delivers

lem management, console management and file management into one powerful, unified solution. And since it brings many familiar management features from your mainframe, CA-UNICENTER for OS/2 protects your existing staff and reduces the need for new staff, making it a highly cost-effective solution, too.

With such rock-solid systems management, you could say CA-UNICENTER for OS/2 takes operating at a higher level to an even higher level. To order or to find out more about OS/2 2.1 or CA-UNICENTER for OS/2, call 1 800 3-IBM-OS2. In Canada, call 1 800 465-7999.

Operate at a higher level.™

IBM and OS/2 are registered trademarks and Workplace Shell and "Operate at a higher level" are trademarks of International Business Machines Corporation. © 1993 IBM Corp.



For users who really cook!



Gail Ostrow, Andrew Verdeska, and Dave Conklin.

Silver Grey cooking apron

50% cotton, 50% polyester; 30" long; handy double pockets, adjustable neck strap.

Please send me _____ aprons (\$18 each) \$ _____
add shipping \$ 3.00
TOTAL enclosed \$ _____

Name _____

Address _____

City _____ State _____ Zip _____

Enclose check or money order or charge card authorization.

Please bill my ☐ Visa ☐ MasterCard

Card number _____ Exp. Date _____

Signature _____

Send to: **DISC-O-TECH**
7831 Woodmont Ave., #381 • Bethesda, MD 20814

CONNECTIVITY

The Lotus Link

WordPerfect, meanwhile, thinks that the presence of Lotus Notes in the OS/2 groupware market is quite positive. "We look at Notes as being complementary to Office," Ehat says. Indeed, WordPerfect is releasing a Notes gateway. He points out that Notes is really a development environment for group productivity applications. "We don't look at Office as a development environment," Ehat says.

Ehat thinks that the growing popularity of OS/2 will help native OS/2 groupware applications reach critical mass. Once that happens, all it will take is something to trigger a stampede to groupware. Ehat thinks he knows what that something is. "The killer LAN application is e-mail," says Ehat, "next is calendaring and scheduling." Ehat notes that many OS/2 users already have the most important functions available on other systems, such as mainframes, so they know what's possible, and really only need a reason, such as wider demand, to move.

Lotus is doing its part as well. While Notes may be a development environment, the company's other productivity packages are ready to use. Lotus is already working to make its cc:Mail and Organizer products part of the Notes environment so that they can help fill out a groupware solution. In addition, the OS/2 WorkPlace version of cc:Mail has just been released.

A closer link comes with Lotus 1-2-3 and its Version Manager feature. "Version Manager uses Notes as its infrastructure," says Hatcher, noting that the resulting ability to share spreadsheets with Notes operates down to the level of individual cells.

All of these moves will eventually make OS/2 a groupware paradise—provided demand materializes and customers accept the sophisticated applications that Lotus, WordPerfect and others have planned. In some cases, OS/2 groupware will provide a vital link between legacy systems and the newer platforms that will eventually replace them. In other cases, OS/2 groupware can provide whole new areas for companies to explore. Either way, OS/2 based groupware has a sunny future and a lot of room to grow. ♦

Wayne Rash is OS/2 Professional's consulting editor and the author of the Connectivity column.

BYTES & PIECES

continued from page 17

to use them have effectively throttled the spread computers into every-day life. Most importantly, the lack of standards has seriously hampered the use of even the crudest keyboard and mouse tools. For example, F1 means one thing in application A, but something else in application B.

I grew up on a large farm in western Kansas and remember the lack of standards on farm equipment. In those days, some tractors used hand clutches activated by a long lever. I always used a Case tractor where you pushed the lever forward to disengage the clutch. But I spent one summer working for a neighbor who used a John Deere. The operation of John Deere clutches was exactly the reverse of the Case.

I adjusted to the Deere nicely. But when I back to the Case, I instinctively pulled the clutch lever sharply backward

to set the brake. The tractor responded, naturally, as a Case and not as a John Deere. By the time I had the presence of mind to push the clutch lever forward to neutral, the tractor was stuck atop a heavy beam with one huge rear wheel spinning slowly in the air.

I remember thinking that someday people would be smart enough to establish standards to avoid such dangerous situations. Today's computer industry is just as stubborn as Case and John Deere were in the 1950s. It seems to me that when intelligence and stubbornness meet, stubbornness wins. And we lose.

Hank Klierwer

IRS snooping

Some 370 employees of the IRS may be disciplined because of alleged misuse of their access to the Integrated Data Retrieval Service (IDRS). The IDRS database includes a taxpayer's name,

address, social security number, dependents, gross income, taxable income, and tax liability. Some of the juicier tidbits seemed to have enticed curious revenueurs. A GAO report, requested by Senator John Glenn (D-Ohio), also cites workers for "allegedly preparing fraudulent returns and taking kickbacks from bogus refund checks."

Even before this report was filed, the IRS had launched a decade long redesign of its massive computer system. The \$23 billion project, called Tax Systems Modernization, is supposed to increase access for IRS staffers to "improve customer service and agency efficiency." In light of the recent report, Hill sources say, IRS commissioner Margaret Richardson isn't sure she wants all that access being so accessible. ♦

Anne Longworth

If you're navigating the world of CompuServe, don't forget your Golden CommPass™

Here's what smooth sailing on the data stream is really all about, an OS/2® program that gives you customized, completely automated access to CompuServe forums, libraries and mail.

Select where you want Golden CommPass to go and what you want it to do — *Off-line*.

Tell it to log on and it breezes through its duties, then logs off. Now you can read, compose messages and choose what else to explore and retrieve *before* logging on again.

Take advantage of the power of OS/2:

Multitasking allows Golden CommPass to run in the background, *without* noticeably slowing any applications in the foreground; **Multithreading** means you can simultaneously reply to your mail, scan forums and download files from libraries; **Icons, windows and dialogs** make it attractive and easy to use.

Save your doubloons.

Whether you're a new or long-standing CompuServe member, Golden CommPass is guaranteed to help trim your billable time on-line.

CompuServe has brought you connectivity. Golden CommPass brings you unprecedented simplicity and productivity.

That is why you bought your PC, now, isn't it?



ONLY
\$99

Golden CommPass™

CompuServe® Access Software

Circle #6

Creative Systems
Programming Corporation

Phone: (609) 234-1500
Fax: (609) 234-1920

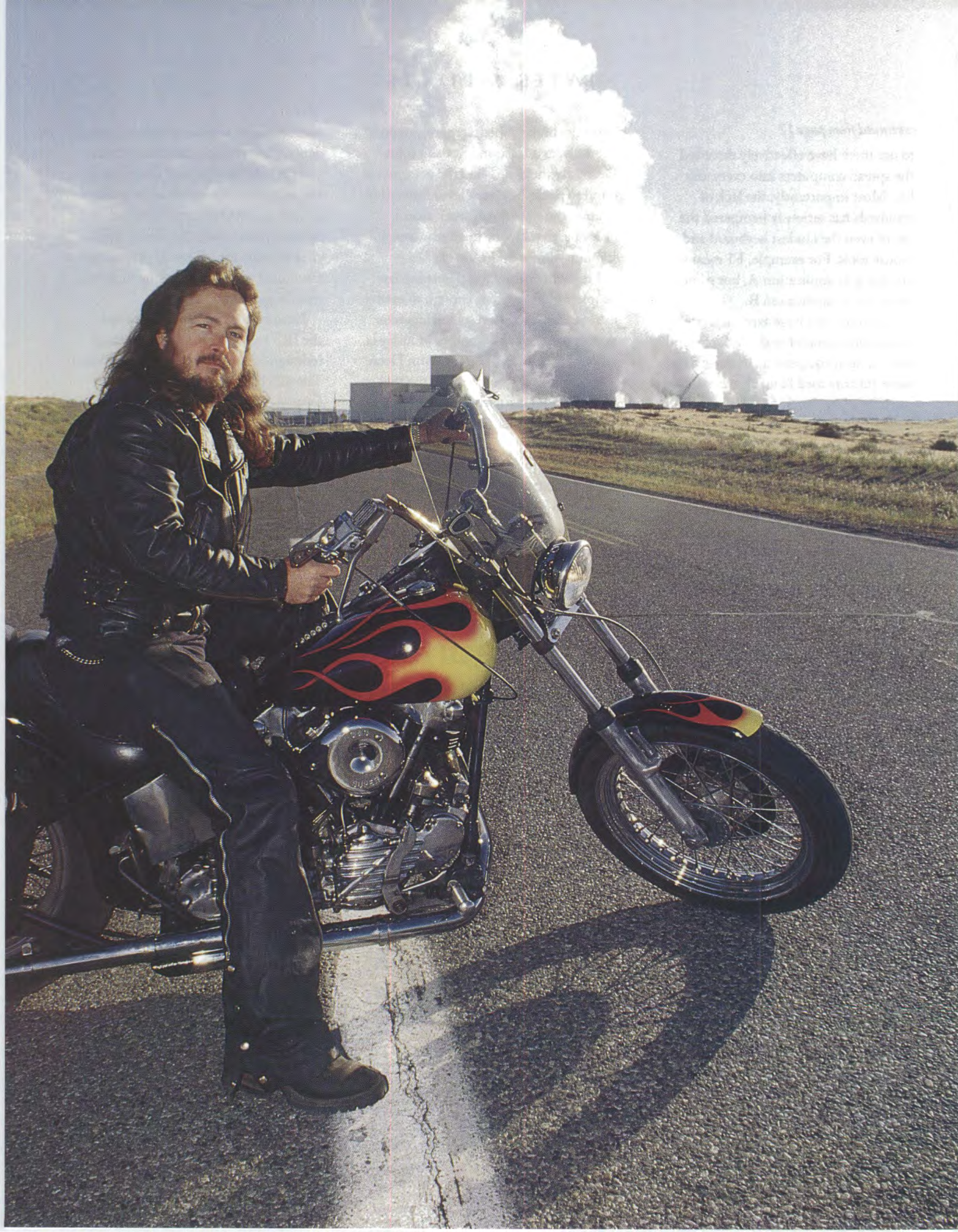
CompuServe: 71511,151

**90 Day Satisfaction
Guarantee**



New Jersey Residents Add 6% Sales Tax
Overseas Orders Add \$15 Shipping/Handling

OS/2 is a registered trademark of IBM Corporation. • CompuServe is a registered trademark of CompuServe, Inc.
Golden CommPass is a trademark of Creative Systems Programming Corporation



USER PROFILE



IN THE FAST LANE WITH OS/2

A biker revvs up with OS/2, and helps a nuclear station stay cool.

BY ANNE LONGSWORTH

The sun is just beginning to spread its oppressive summer heat through the Columbia Basin as Pat Murphy pulls out of his driveway and starts his 32-mile journey. But Pat is cool on his 1947 Harley Davidson Knucklehead—even cooler now that the machine, with its 45 horsepower engine, sports custom-painted yellow flames along the side. Pat's destination is the Washington Public Power Supply System (WPPSS), the controversial nuclear power complex in the Pacific Northwest. About 10 miles away from the plant, Pat starts to see the 70-mile span of fenced-in buildings that is the Hanford Nuclear Reservation (HNR).

Pat submits to an extensive security check before he can enter the office he shares with five other PC Support team members. Once he's at his desk, the day quickly fills up with calls—up to 40

phone calls from panicked customers on an average day. But Pat is totally relaxed doing a job that turns him on as much as his motorcycle ride: promoting and supporting OS/2.

What's Pat's attitude toward Windows? Try calling him any afternoon. You'll get his answering machine, which will tell you, "If you have an OS/2 question, please press one now. If you a Windows question, please hang up now."

Pat, 33, started working at WPPSS in April three years ago—the same month the beta version of OS/2 emerged. On one of his first days there, he was in the back room setting up six new systems. Two had Windows installed—pretty standard. But the other four had this new operating system, this OS/2 thing. He was struck by its efficiency—the ability it offered to load programs and organize the desktop at the same time. "I loaded up 1.3 and

USER PROFILE

then loaded up the beta and I've been working in the beta ever since." For Pat, there's no turning back. The plant now runs 350 licensed copies of 2.0 and the support team is in the process of upgrading to 2.1.

WPPSS, a public power utility, is located in the desert valley of the Columbia Basin, outside the town of Richland, Washington. The Cascade mountains mark the border to the west and the Blue mountain range offers protection on the east. It is just one of many buildings on the Hanford complex, operated by the Department of Energy. HNR, a research and testing ground, supplied the plutonium for the "Fat Man" bomb dropped on Nagasaki that ended World War II. In its 50 years of existence, the Reservation has had its fair share of public scrutiny. Starting as early as 1955, reports have repeatedly surfaced about toxic waste trouble, faulty equipment, incompetent workers and radiation exposure to the 33,500 Richland residents. On top of that, the Washington Public Power Supply System (known in recent years as WHOOPS), has had major financial problems. After a court battle that went on for almost a decade, WPPSS has been forced to honor about \$800 million in bonds issued to fund five nuclear power plants. Only one building was ever completed.

Soft-spoken Pat Murphy says he is not affected by his controversial place of employment. He concedes, "The town is really pro-nuclear, but we've got the other side of the mountains over near Seattle that doesn't think we should have nuclear power. So there's a big fight going on." Actually, Pat would rather talk about OS/2 and he'll change the subject back to it every chance he gets.

WPPSS runs 1,400 PCs throughout the plant, most of them operating on OS/2 2.0. Although "there are a few die-hard Windows users that I may never get to convert," Pat supports all the departments, including Accounting, Word Processing, Engineering and Contracts. Each department has its own reason for liking it. For example, Pat says, Contracts "has gotten quite a lot of enhancement out of OS/2 because they do the mainframe applications. They're really excited about the cut-and-paste fea-

ture." Another advantage for Contracts is being able to print a string of slides using Harvard Graphics while doing other functions. This saves up to 45 minutes each time a print session is needed.

Why does Pat himself like OS/2? For two main reasons. One is that "Windows was too restrictive. And with OS/2 I am able to open up a command prompt and still function like I used to in just pure DOS. But I don't have the limitations of DOS."

The second reason is that the operating system is saving WPPSS a great deal of money. OS/2 DOS sessions are not hampered by tight memory constraints on the lower 640K of RAM and conflicts between programs accessing extended or expanded

memory. Rather than purchasing additional systems on each desk to run DOS applications and mainframe connectivity sessions concurrently, WPPSS simply runs all of the applications together on desktop OS/2 machines. The biggest disadvantage stems from the limited disk space on the IBM PS/2 Model 70s. Until the recent release of Stacker for OS/2, the only route to increased disk capacity was through hardware upgrades.



Pat has always been into fixing things. During his three-year Air Force stint in the Philippines, he began fiddling around with motorcycles, "During your off-time that's about all you had—working on motorcycles."

In the past 15 years, hobby has turned into addiction. He bought his Harley in 1982 and does the mechanical work himself. Today, Pat is part of the pit crew for the National Hot Rod Association Quarter Mile Drag Races. A coworker owns and drives the car that Pat and four other WPPSS employees help maintain. Last year, they placed third at the Yakima Renegade track and this year they are eyeing second place. Not only does the winning team get a trophy, but also, Pat adds proudly, "You get your name in all the national dragster magazines so everybody in the country sees it."

After the Philippines, Pat worked in electronics for companies in Arizona, New Mexico, and Texas. During that time, he devel-

USER PROFILE

oped an interest in computers and built a clone for his home use. As a hacker he had the dream of working for the ultimate in computer companies, IBM. He applied repeatedly but, without a degree in computer science, Pat was denied.

So when he moved to Richland seven years ago, Pat enrolled to earn a degree at a local community college. In addition to full-time school he also worked full time, to help support his wife of 15 years, Christy, and his two boys, Neil, 13 and Jack, 9. Then, with diploma in hand Pat found that IBM was cutting back and he still couldn't score a job at Big Blue.

Pat now has what he says is the next best thing—spending all his time working with OS/2. And that's not just at work: on his home computer Pat uses OS/2 as a platform for applications that keep track of information for the race car, let him write his correspondence, and lets the kids do their school work and play games.

It's at WPPSS, however, that Pat sees the real value of the operating system he calls "the way of the future." The PC Support group has really loaded up the machines since installing 2.0. The

key applications that each department use include WordPerfect 5.1 for DOS, Microsoft Excel, Borland's Quattro Pro and Paradox, Harvard Graphics, and Datastorm Technologies' ProComm. In addition, the engineers in the plant are using AutoCAD version 12, and Easy CAD. The AutoCAD runs courtesy of a fix from IBM that allows WPPSS to use the application through DOS on OS/2. It runs smoothly through IBM's Token Ring with OS/2 LANServer version 3 software.

After running OS/2 for three years, WPPSS has had no major computer problems. Nor is training fellow employees on OS/2 a problem. "I can usually do the training while I'm installing OS/2," Pat says confidently. "Most people pick it up on their own real fast." And fast—whether it's riding his Harley, working the drag races or keeping up with OS/2—is definitely the speed Pat Murphy likes. ♦

Anne Longsworth, formerly an assistant editor at Corporate Computing, recently joined OS/2 Professional as a staff writer.

Subject Dictionaries for Maximum Accuracy

POWER TRANSLATOR™ PROFESSIONAL for OS/2

- Full-sentence, idiomatic accuracy
- 20,000+ word per hour speed
- 250,000+ word & phrase/user-modifiable dictionaries
- Menu-driven, bilingual screens
- Bilingual manual
- Word processor compatibility

- Interactive (on-screen) editing or batch file text processing
- New Grammar Module for language learning
- Compatible with all popular OCR scanning programs and virtually all scanners
- Multiple translations of a word based on its part of speech

Now Your Computer Can Speak Business in 5 Languages!

Your competitive edge in the new international marketplace.

Talk to your software supplier or call **Globalink** direct:

1-800-767-0035



Globalink®

The Language of Business

9302 Lee Highway Fairfax, VA 22031

Phone: (703) 273-5600 • Fax: (703) 273-3866

Circle #104

**Spanish
French
German
Russian
English**

**OS/2
UNIX
Macintosh
PC/MS Dos**

Now Available
Under OS/2® 2.0



All It Takes to Turn Raw Data into Real Information.

The SAS® System for Information Delivery.

The head of new business development is demanding next year's sales predictions—by next *week*. The Total Quality Management team has found an outstanding new way to design experiments—but their stand-alone software doesn't know how to do it. And the CFO is still looking for spreadsheets—of unlimited size.

Unfortunately, your time *is* limited. And so is your budget for new analytical packages. So how can you possibly keep up with the diverse data analysis needs of your diverse user community? The answer is the SAS® System for Information Delivery.

One System for Your Organization's Entire Range of Data Analysis Needs

No matter what kind of data they're analyzing, your clients will get results they can trust with the SAS System. Renowned statistical tools are fully integrated with powerful operations research, econometric, and time series methods.

For specialized tasks, explore the SAS System's quality improvement, experimental design, clinical trials testing, laboratory data analysis, and visualization techniques.

There's even an interactive matrix language for the most advanced mathematical, engineering, and statistical needs.

Call Today for a Free Evaluation

See for yourself why more than 20,000 companies—from aerospace to agriculture, manufacturing to medical research—trust their most important data to the SAS System. Just give us a call at 919-677-8200 to discuss your organization's analytical needs and to receive a free SAS System executive summary. Also ask for details about the SAS System Executive Briefing...coming soon in your area.

The SAS® System. The World's Leading Information Delivery System.



SAS Institute Inc.
Software Sales Division
SAS Campus Drive □ Cary, NC 27513
Phone 919-677-8200 □ Fax 919-677-8123

SAS is a registered trademark of SAS Institute Inc.
Copyright © 1992 by SAS Institute Inc. Printed in the USA.



DOT EXE

Software for OS/2

WordPerfect

REVIEWED BY BRADLEY DYCK KIEWER & EDWIN BLACK

If you are one of the hundreds of thousands of OS/2 enthusiasts who use WordPerfect for DOS or Windows, you may want to be one of the first to upgrade to WordPerfect for OS/2. But be forewarned, you will be an early adopter of software that is in-progress.

First, understand that 5.2 for OS/2 is indeed *Word Imperfect* for OS/2. But it's a very commendable Word Imperfect for an OS/2 community that demanded it, and has proven its mettle as early adopters. Quite simply, WordPerfect has listened to the market, especially the corporate market; and made a commitment to the OS/2 platform. That commitment entails not only their word processor, but a suite of applications which includes Informs, Presentation, and Office.

Last January, WordPerfect announced it was getting a jump on its own commitment via a quick port of their 16-bit Windows product. The company was honest and open about 5.2 being an interim product en route to 6.0, a true 32-bit native app. Precisely because WordPerfect dominates the word processing world with some 60 percent of the worldwide market, their entry into the OS/2 realm was and is an indispensable milestone for OS/2.

Indeed, WordPerfect Corporation has done a commendable job incorporating Workplace Shell features into this transition product. Promise it has. Performance it does not have. The product is slow, and if you're using a slower system, you can expect to see the flying clock as a regular feature on your screen. If you have been using WordPerfect for DOS in an OS/2 environment under a DOS session, you will find 5.2 downright phlegmatic.

Of course, any word processor that makes full use of a GUI will be at a performance disadvantage compared to a DOS character-mode application. All other things being equal, it simply takes

the computer longer to write data to a graphics screen. When you begin adding enhancements to your document (proportional spacing, boldface, italics, etc.), the system must execute many additional calculations and operations to properly display the text. If you come from a DOS word processing background, any GUI-based word processor (Windows or OS/2) may seem inexorably slow.

Please Wait

On a 20MHz 386, the delay between typing a character and its appearance on the screen can be annoying. Typing at a speed of approximately 65 wpm, we could easily get a few characters

ahead of the display with standard typefaces such as Courier and Helvetica. Adding formatting enhancements such as bold and italics to the text further degraded performance. In some cases, we could outpace the sixty-plus character keyboard buffer, thus losing characters and hearing a chorus of warning beeps. These problems disappeared upon moving to a 33MHz 486. Even on our

fastest systems, though, WordPerfect did not have the snappy responsiveness we have come to expect in other applications.

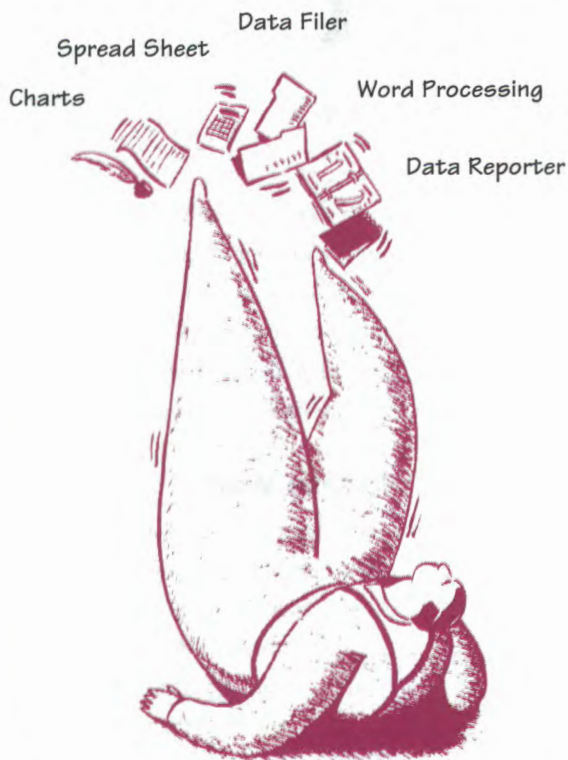
Fortunately, WordPerfect's programmers added several optimization routines that keep the graphics interface moving along. For example, the current line of text has the highest screen update priority. If you type quickly enough, you will see the lines below the cursor "disappear" as the new lines "overwrite" the old. When you pause, WordPerfect updates the rest of the display and all of the text appears in proper order. Similarly, WordPerfect speeds document navigation by scrolling several lines at a time if you hold the cursor up or down keys.

Other GUI routines are not so well tuned. Menu operations and window management routines, for example, respond very



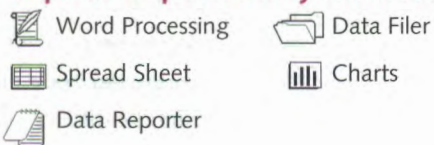
Footprint **WORKS**™ For OS/2

OS/2 32 bit Integratable Modules



Put Your Best Foot Forward With Footprint Works for OS/2

Five integrated modules providing a full range
of personal productivity features...



Footprint Software will make available
to corporations and developers

SOM Objects, Source Code & API's

Call About Our Cost Effective
Solution for Volume Users.

For Information or prices contact Sharon Manuel at

Footprint
SOFTWARE INC.

Tel: (416) 860-0477 Fax: (416) 860-1780
53 Yonge St. Toronto, Ont M5E 1J3

DOT EXE

slowly at times. Thus, if you edit a style from the style sheet, WordPerfect will sometimes cycle through underlying windows on the Workplace Shell before loading the style definition and returning focus to the WordPerfect window. This not only slows performance, but can be quite confusing.

The lackluster windows management performance probably results from the OS/2 version's close association to the 16-bit code ported from Windows. Cosmetically, the OS/2 version is indistinguishable from the Windows version. But once you begin menu and window operations, the performance characteristics set these versions apart—WordPerfect for Windows (whether in native Windows or Win-OS2) outperforms WordPerfect for OS/2 by a wide margin.

On the other hand, most operations that bypass menus and dialog boxes, such as global search and replace, run at nearly the same pace on all three platforms (with none having a clear edge). There were a few exceptions. File retrieval and spell checking were noticeably faster under Windows/DOS than OS/2 or Win-OS/2 (up to 50 percent faster under Windows in some cases). Text entry is the only facet we could find in which OS/2 held a slight performance advantage.

Desktop Integration

But there is a lot to recommend WordPerfect for OS/2 users. What really sets this first version of WordPerfect for OS/2 apart from the Windows version is its integration with the Workplace Shell. Features such as long file name support (under HPFS), drag and drop, Automatic Document Detection (ADD) and extended attributes make WordPerfect for OS/2 feel at home in the operating system.

Do you want to open a document within a WordPerfect session? Simply drag the file icon from an open folder into the WordPerfect window or onto its icon. If WordPerfect is buried beneath a cluttered desktop, double click the mouse on a WordPerfect document. You'll have no problem finding your WordPerfect documents—they're each tagged with a unique WordPerfect document icon (even if the documents were created on another computer or with a different version of WordPerfect, thanks to ADD).

Whenever you open a folder, ADD scans the contents for WordPerfect 5.1 or 5.2 files. If it finds any that have not yet been registered with OS/2, ADD creates an icon and copies summary information into the extended attributes. Thus, any time you want to see data you've entered (such as author, typist, subject,

DOT EXE

account and/or the document's abstract), just open the icon's settings from the Workplace Shell.

Do you want to put a picture or logo in the document? Position your cursor where you'd like it and then drag the icon from the Workplace Shell to the WordPerfect window. WordPerfect will automatically detect the image format, convert it if necessary, and position and size the picture within the document. After this initial formatting, you can adjust the settings to your particular requirements.

This drag-and-drop methodology also extends to operations within the document itself. To move text, highlight the text and drag it to the new position. You can either drag with the left mouse button (a la WordPerfect for Windows) or with the right mouse button (for those familiar with Workplace Shell operation).

Thanks to the tight integration with the Workplace Shell, you can print a WordPerfect document even when WordPerfect is closed. If you drag a document from a folder to the printer icon, OS/2 will automatically open a minimized copy of WordPerfect, load the document and print it.

There are a few kinks in the Workplace Shell integration, however. WordPerfect for OS/2 does not take full advantage of multithreading, especially for handling event processing. While loading WordPerfect or inserting a graphic, you will lose access to other Windows on the desktop until the operation completes. This can be extremely annoying when importing a complex image since the delay can last several minutes.

Every once in a while we would close WordPerfect and discover that the icon was still cross-hatched as if WordPerfect were still running (although it disappeared from the task list). On these occasions it was impossible to start WordPerfect, and we had to resort to a system shutdown to regain access. We have seen similar problems with other applications, so much of the problem may reside in OS/2. Unfortunately, it seems to occur a bit more frequently with WordPerfect.

Where multithreading is enabled, it certainly made work easier. Immediately after starting a print job, for example, you may begin editing any document—even before the current job has finished spooling. In another case, multithreading rescued us from a potential loss of data. During one search, OS/2 came back with an error and killed the process (a WordPerfect thread). We expected the windows to close, and were surprised to see the search window still in focus on top of WordPerfect. The buttons continued to "click," but nothing would happen (no search, no

SIGHTS FOR OS/2

Save your screen with new WipeOut from BocaSoft.

WipeOut prevents screen burn-in and does it with 16 animated displays integrated with synchronized digital audio, digital video, password protection and online help. Displays include icon hunters, crawling roaches, space shuttles, customized messages, plus many other visual and sound delights.

All you need is OS/2 2.0 or later; digital audio requires MMPM/2 1.0 or later and an audio card supported by MMPM/2.

CALL NOW
407-392-7743
BOCA RATON



Circle #82

THE PARALLEL SOLUTION



TAPE BACKUP

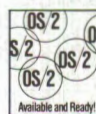
plugs into any standard
parallel port, supports DOS,

OS/2, Windows, NetWare, SCO UNIX and XENIX.



• Complete with powerful solution-minded software series, including BUS (BackUp Supervisor Software), SM (Script Manager) and SDB (SCSI Disk Backup).

• Timesaving, simultaneous backup and verify at true 11MB/min.



• 250MB-4GB capacities in native mode.

• Optical 128MB-1.2GB, removable media.

• QIC industry standard format.

• Extremely portable, weighs as little as a notebook.



Circle #113

**PSS PARALLEL
STORAGE
SOLUTIONS**

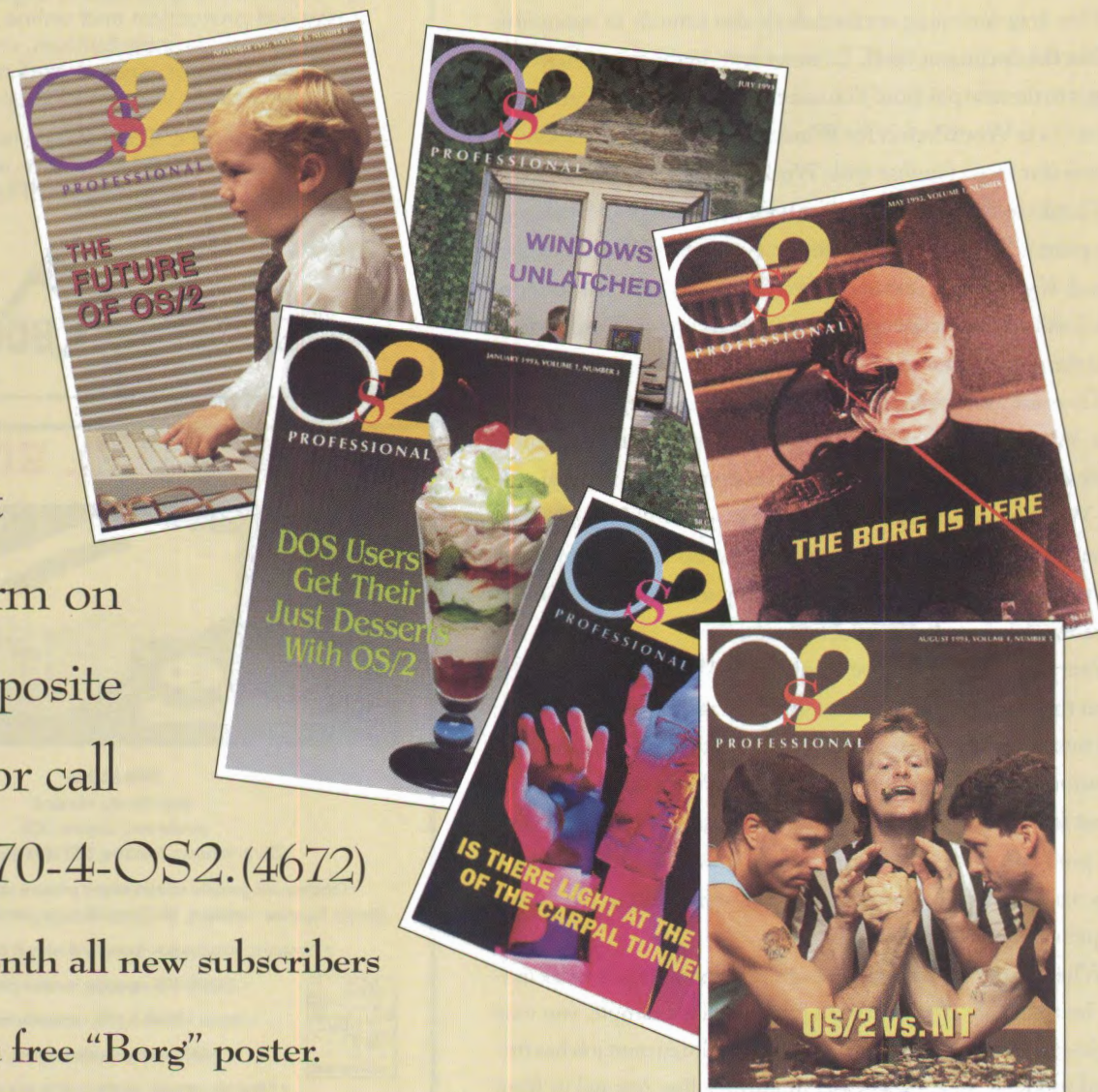
The Pacesetter in Parallel to SCSI Technology

INFO AND ORDERS: 1-800-998-7839

CORPORATE HEADQUARTERS • 116 S. CENTRAL AVE • ELMSFORD, NY USA 10523 • FAX: (914) 347-4646

Don't turn the page without subscribing to:

Just
fill out
the form on
the opposite
page, or call
301-770-4-OS2.(4672)
This month all new subscribers
receive a free "Borg" poster.



Don't miss an issue of OS/2 Professional—the only mass circulation OS/2 magazine serving 200,000 readers.

DOT EXE

escape). Just as we were about to give up hope, we noticed that the underlying WordPerfect window was still responding to the mouse. We were able to make a few minor corrections to the document, File-Save and close WordPerfect without any data loss (the search window sitting on top all the while).

The Corporate Solution

Perhaps WordPerfect's greatest asset is file interchangeability between platforms. Unlike our old standby, Microsoft Word, which uses a different file format for each supported platform, WordPerfect maintains a consistent format for DOS, Windows, Macintosh and OS/2 (assuming, of course, that you keep version numbers consistent across platforms). This is an important consideration in larger corporate departments, and is crucial for mixed-platform networks. WordPerfect can also import and export files in formats readable by earlier versions of WordPerfect and several popular word processing formats such as Microsoft Word, WordStar, Multimate and XyWrite. This review was written and edited interchangeably in Microsoft Word for DOS/Windows and of course WordPerfect 5.2 for OS/2.

WordPerfect for OS/2 can use its own printer drivers (further enhancing cross-platform compatibility) or the OS/2 printer drivers. The installation program recommends installing the WordPerfect drivers. If you follow this advice, switching to the OS/2 printer drivers is as simple as clicking a button on the print menu. This gives you the greatest flexibility at the loss of disk space consumed by the additional drivers.

General Features

Several features take advantage of the graphical interface. You can turn on the ruler to gain one-click access to formatting features such as margin settings, tab stops, fonts and table settings. The latter option is very useful when setting up tables. When you click on the button, WordPerfect presents a grid that looks something like graph paper. After highlighting model cells (columns and rows), WordPerfect automatically creates a matching table at the current cursor position.

If the ruler options seem too limited, you can use a separate tool called the button bar that runs macros or menu selections with a single click (e.g. click on the Save button instead of using File-Save). The button bar is fully customizable, so you can design and arrange the buttons to match your most common

continued on page 89

SOUNDS FOR OS/2

We aren't just makin' noise...we've got 'em.

Get "System Sounds for OS/2" with these unheard of features:

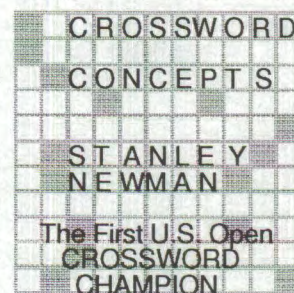
- 🔊 Hear sounds for over 40 events.
- 🔊 Make any key on your keyboard sound off at your command.
- 🔊 Use over 50 included audio effects from PROSONUS' Mr. SoundFX™.
- 🔊 Record your own sounds.

All you need is an audio card supported by MMPM/2 on OS/2 2.1.

CALL NOW
407-392-7743
BOCA RATON
Circle #82



and



PM-CROSSWORDS

Now that your computer is doing all of your work in half of the time...you can afford to relax a few minutes with some delightful brain-twisters. OS/2 will continue to do your other ten tasks. So if you can afford to relax, you can't afford NOT to have PM-CROSSWORDS. It's an entertainment that you can enjoy for minutes at a time. We have over 300 crossword puzzles in Version 1.0 and if somehow you finish all of those.... we got alot more!

Mail Check or Money order to

ROBAR **\$34.95**
1238 Starlit Drive
Laguna Beach, CA 92651 plus \$2.55 Shpng/Hndlng
(714) 497-4623 (Calif. residents add 8% s/s tax)

Circle #128

VAN NOSTRAND REINHOLD

Server
with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

Server
with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

Server
with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

Server
with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

2XNOTEBOOK

VAN NOSTRAND
REINHOLD

t/Server
ing with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

t/Server
ing with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

2XNOTEBOOK

VAN NOSTRAND
REINHOLD

t/Server
ing with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

t/Server
ing with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

2XNOTEBOOK

VAN NOSTRAND
REINHOLD

t/Server
ing with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

t/Server
ing with OS/2 2.0
2nd ED.



VAN NOSTRAND
REINHOLD

2XNOTEBOOK

VAN NOSTRAND
REINHOLD



Client/Server
Programming with OS/2
2nd ED.



Client/Server
Programming with OS/2
2nd ED.



Client/Server
Programming with OS/2
2nd ED.



Client/Server
Programming with OS/2
2nd ED.



Client/Server
Programming with OS/2 2.0
2nd ED.



OS/2 2XNOTEBOOK



Client/Server
Programming with OS/2 2.0
2nd ED.



Client/Server
Programming with OS/2 2.0
2nd ED.



Client/Server
Programming with OS/2 2.0
2nd ED.



OS/2 2XNOTEBOOK



Client/Server
Programming with OS/2 2.0
2nd ED.



Client/Server
Programming with OS/2 2.0
2nd ED.



Client/Server
Programming with OS/2 2.0
2nd ED.



OS/2 2XNOTEBOOK



Client/Server
Programming with OS/2 2.0
2nd ED.



Client/Server
Programming with OS/2 2.0
2nd ED.



OS/2 2XNOTEBOOK



Client/Server
Programming with OS/2 2.0
2nd ED.



Client/Server

BOOKING *on the* FUTURE OF OS/2

Publishing books in any field is a long-term gamble. In the OS/2 field, that gamble was even more risky. But one publisher was out in front to prove that OS/2 books can hit the market running.

BY WAYNE RASH, JR

"VNR was a visionary," says author Steve Mastrianni. Van Nostrand Reinhold was in the right place at the right time to take advantage of the huge growth in popularity of OS/2, and in the process, has written a success story of its own. As is often the case in the world of personal computers, the success of an operating system or a major application creates a companion success in products that help users work with it. Now that sales of OS/2 have taken off, VNR's books about OS/2 have taken off as well.

Most of the success of VNR was a payoff for good planning. The company's executive editor for computer science, Diane Littwin, saw the OS/2 boom long before her colleagues in other companies. Littwin primed the pumps at VNR with a select group of authors who could turn out the critical books that the new users of OS/2 would need once they adopted the operating system.

Littwin is generally agreed by many in the industry to be the individual behind VNR's visions of OS/2's success. "She really took a chance," says Mastrianni. "She stuck her neck out." For example, one of the most successful books in the history of OS/2-related publishing was one with the unlikely title *Now That I Have OS/2 on My Computer, What Can I Do With It?* This book sold more than 25,000 copies in its first year in print, a huge number for such a specialized market.

Sticking your neck out in the publishing business is rewarded by getting your head chopped off—unless, of course, you're right. Littwin, by all accounts, is right in most things she does. As a result, so is VNR. "The first edition of *Client Server Programming for OS/2* in 1991 sold 18,000 copies," said Littwin, "The second edition sold over 30,000 copies. The third edition is on the way." Selling nearly 50,000 copies of a book on a technical subject like

client/server programming is nearly unprecedented.

Ironically, late in 1990, Brady Books, a subsidiary of publishing giant Paramount Communications, changed its mind on *Client Server Programming for OS/2* leaving the title without a publisher. This book's best-seller status formed the kernel for the growth of the VNR OS/2 book list.

Getting Started

VNR's move into a position of OS/2 domination was planned far in advance. "Diane told me a long time ago that she wanted to be in this market," says Mastrianni. "She picked the right authors and the right books, then she used us to review other proposed books to make sure they were right for the market."

The result of Littwin's careful selection of authors has been wide popular acceptance. Mastrianni's book, *Writing OS/2 2. 1 Device Drivers in C*, hardly seems like the stuff of bestsellers, yet despite its advanced level and difficult subject, the book has already sold 15,000 copies, and the second edition is just coming out.

Littwin has signed up the authors who know OS/2 the best. Mastrianni, for example, works as a consultant for IBM, helping its developers and the developers who work for third parties to create device drivers in OS/2. That work led him to realize that IBM's books on OS/2 programming—mostly reference manuals—were useful if you already knew how to program, but not very useful at all if you didn't. To fill this gap, Littwin had Mastrianni write a book that would teach programmers or users how to develop OS/2 device drivers.

The Steam Roller

With the help of authors such as Mastrianni, Littwin was able to select the authors and subjects that allowed VNR to pick up speed.

VENDOR PROFILE

"In 1992 we had ten titles," said Littwin, "in 1993 we had 20 titles, and next year we'll have 30 titles."

The number of titles keeps the customers happy and the competition off balance. Planned for later in 1993 are books that cover the range from C++ and REXX programming to a book on what Littwin calls "The GUI-OOUI Wars." While writing about graphical and object-oriented user interfaces may sound a bit dry, VNR's customers love it.

Sometimes, in fact, customers continue to love a book long after the publisher thinks they will. "We have a real sleeper, *OS/2 Presentation Manager GPI*, that's considered a classic, even though it's for an older version of OS/2," Littwin says. That book illustrates part of the reason that VNR is so popular. It's the only accessible book on a complex subject that's the focus of much attention as developers scramble to create graphical interfaces to work with the newly popular OS/2.

Choosing the Right One

How do you collect a stable of winners for your publishing house? Partly, you talk to other authors. "I gave them some direction," says Mastrianni. In fact, Littwin looks to a number of sources to make sure she's getting a book that's right for her market. "We look for topics that are the most popular," Littwin explains, "then we do a critical peer review."

Of course, there's more than just that. After picking the right topic, the next step is quality. "We do a thorough copy edit," Littwin explains. What's more important, though, is that VNR doesn't work with pre-release software, because things can change and, as a result, the book can end up being wrong. "We want real code and real screen shots," says Littwin, "That way, there's integrity to the information."

Coming Soon to a Bookstore Near You

By next year, VNR will have books in print covering OS/2 and NetWare, OS/2 and Multimedia, and objects for OS/2. And that's just the beginning. Littwin says that VNR is studying the possi-

bility of publishing reference works on CD-ROM, and she would like to publish an OS/2 reference as soon as it becomes feasible.

Ultimately, though, the success of VNR's OS/2 list depends on the success of OS/2. "I would like to see it selling better," says Littwin. She also worries about IBM's marketing and product planning, and what effects they might have on OS/2. "I'm concerned whether the development of the Workplace Shell will dilute the OS/2 market if IBM comes out with DOS and UNIX versions of the Workplace Shell," Littwin says.

Still, she has great hopes for the OS/2 book market. "It's an underpublished area," she says, and VNR is "expecting great growth." On the other hand, she's not particularly worried about the publishing challenge presented by Windows NT—at least not in the short term. Referring to some recent NT marketing efforts as "lackluster," Littwin said that publishers are moving into the NT market with some hesitation.

The Future of OS/2

IBM's success with OS/2 translates directly into success for VNR and its authors. In return, the existence of good books about OS/2 helps sell the operating system. As a result, most companies promote books about their OS products, because the books help promote the product. Mastrianni says that IBM is doing just that. "IBM is giving the book to customers and OEMs," he reports, noting that IBM has bought "a boatload" of his book on device drivers for distribution to its customers.

Ultimately, IBM will decide the future of VNR's OS/2 list as it decides the future of OS/2 itself. At this point, the picture looks favorable, if not exactly rosy. OS/2 clearly leads NT in bang for the buck, especially with the recent rise in memory prices. Whether OS/2 can maintain this lead or not depends on IBM, and that in turn will control whether VNR continues to sell a hundred thousand OS/2 books a year or not. Diane Littwin and VNR clearly think IBM can maintain its lead. ♦

"DIANE TOLD ME
A LONG TIME AGO
THAT SHE WANTED
TO BE IN THIS MARKET,"
SAYS MASTRIANNI. "SHE
PICKED THE RIGHT
AUTHORS AND
THE RIGHT BOOKS."

INPUT

continued from page 11

Smorg as Borg

Just what is IBM trying to tell us by giving OS/2 2.1 the code name BORG? As I recall from several episodes of *Star Trek: The Next Generation*, the BORG are mindless automatons bent on the total assimilation/destruction of all life in the universe! Perhaps the OS/2 evangelists' constant railing against the success of Microsoft Windows has finally taken its toll.

In "OS/2 Should Open the Window" [May, Zachmann's View], Zachmann correctly asserts that "OS/2's best opportunity is not to oppose Windows or to try to convince Windows users they've gone down the wrong road. Instead, it is to persuade them that OS/2 offers a better way..."

I recently had the unpleasant experience of doing some programming under OS/2 2.0 and was seriously frustrated by the frequent system crashes. I couldn't wait to get OS/2 off my machine! In "The BORG Arrives" [May, Special Report], Herb Tyson claims that "In addition to curing dan-druff, OS/2 2.1 beta gives solid and reliable performance..." My experience with the crash protection of OS/2 2.0 leaves me a trifle skeptical at this point.

Richard Burmeister
Fairfield, Iowa

CM problems

Kelley Shaddrick paints too optimistic a portrait of Communications Manager in "Communications without Magic" [May]. After receiving OS/2 2.0 from IBM in 1992, I installed it and promptly ran into a roadblock with CM. The combination of OS/2, CM, twinax and a particular brand of clone wouldn't fly. The IBM branch folks and the gurus on level two couldn't put it together. So I switched to token ring. (We have both in our shop.)

Months later a patch arrived, and I went back to twinax and OS/2. Silly

me. We recently upgraded software on our AS/400. Now I get mysterious freezes in the midst of processing. Back to level two. They are mailing me a patch that might work, and they want me to turn on some exotic debugging tools if that doesn't work.

I love OS/2—when it works. Sadly our friends at (little) Big Blue still haven't learned lesson one. When you put it in a customer's hands, it must work. I don't know whether this problem is of AS/400 or OS/2 origin. Nor do I care. Today I am back to DOS (again). And OS/2 will be a hard sell to my boss.

John R. Culleton, Jr.
Sykesville, Maryland

Carpal tunneling

I was pleased to read about carpal tunnel syndrome in your magazine (March/April, Special Report), because it is a definite problem in the computer world today. However, I was very disappointed that no alternatives were given.

I am a certified massage therapist, so that's what I pitch. I have found that often the symptoms in the wrist and hand have their causes in "tight" muscles of the forearm, shoulders and/or

neck. Relief is often immediate when you get these muscles to relax.

Look for massage therapists who have been trained in sports massage, neuromuscular therapy or trigger point therapy. If they belong to a national association such as the American Massage Therapy Association, that's even better. But please, make surgery your last resort.

So keep your wrists straight when you type, sit up straight at your desk, take a break every hour and stretch!

F. William Weber, Jr.
St. Charles, Missouri

Puhleeze, John!

Great magazine. However, re: John Dvorak's column on Microsoft [May Dvorak's View], Oh, puhleeze, yourself, John. You're completely out of line when you take off on Bill Gates' wife. So what if she wants to continue working? Would it be more acceptable to you if she sat home, ate bonbons and watched the rain clouds across the Seattle sky? This woman is a professional. Maybe she doesn't want to mooch off her husband. Maybe she wants to con-

continued on page 81

Change of Address

If you've moved, let us know so we can keep your subscription coming. Please peel off and attach your old label, and fill out your new address.

OLD LABEL

New Address:

Name _____

Address _____

City _____ State _____ Zip _____

Mail to Subscription Dept., OS/2 Professional, 172 Rollins Ave., Rockville, MD 20852, or fax to (301) 770-7062.

OS/2 and S/20

(Pretty soon you'll know it backwards and forwards.)

IBM, OS/2 and Presentation Manager are registered trademarks and Skill Dynamics and Workplace Shell are trademarks of International Business Machines Corporation. © 1993 IBM Corp.

Skill Dynamics, an IBM® training and services company, can help you understand OS/2® from every conceivable angle.

With dozens of current courses to choose from, you can become proficient in a wide variety of OS/2 skills.

We cover basic OS/2 and the Workplace Shell™ to OS/2 Database Administration to Networking to Presentation Manager® Coding to Problem Determination to System Administration and Support.

You'll get hands-on training from certified instructors who constantly work with product developers updating their own knowledge and skills—to help you enhance yours.

Best of all, Skill Dynamics offers you the flexibility of customization, a choice of self-study options, plus the convenience of teaching the courses at your site or ours—all of which is good news for end-users, application developers, and anyone in between.

Some of our other courses include everything from an Introduction to OS/2 and OS/2 Facilities and Installation Workshops to OS/2 Advanced Programming Techniques and Performance Workshops.

To learn OS/2 backwards and forwards, start with a review of new course offerings in our OS/2 Education Planner.

Request your free copy by calling now:

1 800 IBM-TEACH, ext. 300.



Skill Dynamics™
An IBM Company



TIPS AND TECHNIQUES

BY GORDON SCOTT

REXX Programming

If you are a programmer by profession, a hacker by hobby, or just a batch file browser, OS/2 has a feature that may pique your interest. Included free with every copy of OS/2 is an interpretive programming language called Procedures Language/2 REXX.

REXX is to OS/2 what BASIC is to DOS. REXX enthusiasts might also add that what OS/2 is to DOS, REXX is to BASIC—superior. REXX is a general purpose interpretive language that is simple enough for quick batch file automation tasks, yet robust enough for complex programming tasks. REXX, like many parts of OS/2, is an underpublicized technical jewel. The following tips, techniques, and information will help you learn enough about REXX to put this important freebie to work for you.

Features found in REXX

REXX has most of the features common to other procedural languages. For instance, the REXX language uses two types of conditional statements: IF...THEN (or IF...THEN...ELSE), and SELECT...WHEN. The SELECT...WHEN statement is a conditional that allows programming logic to follow one of several possible paths at a single decision point—much like a CASE statement in other languages.

REXX allows for three types of conditional loops: DO WHILE, DO UNTIL and DO FOREVER. DO WHILE tests a condition before executing an instruction; DO UNTIL tests a condition after executing the instruction. And, as you can probably guess from its name, DO FOREVER executes until interrupted by an exception such as a LEAVE or RETURN instruction.

To give you a better feel for REXX, the following tips will include pieces of a simple REXX program that modify the LIBPATH= statement of an OS/2 CONFIG.SYS file.

How REXX files execute

REXX programs are plain text files with an extension of .CMD after the filename (just like standard OS/2 batch or command files). OS/2 invokes the REXX interpreter whenever it finds a slash-asterisk combination (/*) at the beginning of a file. This combination is the opening to a comment delimiter for REXX. Thus, the initial /* distinguishes a REXX file from a standard OS/2 command file. The first line in our sample program will be a comment about the program's purpose.

MODLIB.CMD:

```
/* This program will add
   directories to the LIBPATH
   of a CONFIG.SYS file. */
```

**Add a menu item
to your desktop pop-up menu
that invokes the online
documentation for REXX.**

How to do it:

- At the [C:] enter: COPY CON VIEWREXX.CMD
- Type: VIEW REXX Ctrl-Z and press Enter.
- Click on the desktop with mouse button 2 to display the desktop pop-up menu.
- Open the Settings notebook for the Desktop.
- Select the **Menu** tab
- Select the **Create another...** pushbutton for **Actions on menu: Primary pop-up menu.**
- Enter a menu item name (such as REXX Info)

- Enter the program name VIEWREXX.CMD
- Select the **OK** pushbutton
- Close the Setting notebook

**What this buys you: a quick
online reference guide for the
REXX language.**

Now, whenever you click mouse button 2 on the desktop, the new item (REXX Info) will appear at the end of the menu. As a result, the online REXX documentation is now only two mouse clicks away. This provides an invaluable resource when you are first learning REXX.

If you have never added items to the desktop menu, you will discover a further benefit. Since **Arrange** is no longer at the bottom of the menu, you are much less likely to accidentally arrange the desktop icons when accessing the desktop menu (e.g. if you mistakenly click the mouse twice when trying to shut down).

**For simple input and output in
your REXX program, choose
from the four instructions SAY,
PULL, LINEIN and LINEOUT.**

How to do it:

- Code sample:

```
/* (A) */
SAY 'What directory do you want
   to add to LIBPATH= ?'
/* (B) */
PULL AddDir
```
- Additional code will be added here—see the next tips.

```
/* (C) */
line=LINEIN(CONFIG.SYS)
```
- Additional code will be added here—see the next tips.

TIPS AND TECHNIQUES

```
/* (E) */
LINEOUT(temp.fil,line)
```

What the result is:

- (A) → Screen displays:
What directory do you want
to add to LIBPATH= ?
- (B) → User responds:
C:\MYAPP\DLL
- (C) → Reads one line from CON-
FIG.SYS and places the text in the
variable named line.
- (E) → Writes the contents of line as
the first line of temp.fil and returns a
0 if successful or 1 if not.

How can you use these intructions?

The SAY instruction displays text on the screen, typically for informational purposes (Please wait...), or prompting for additional input (Enter filename:).

When prompting for additional input, you can use the PULL instruction to capture the data and assign it to a variable. PULL has two variations:

PARSE PULL and PARSE UPPER PULL. PARSE PULL splits the input into words and assigns each word to its own variable (which you specify). PARSE UPPER PULL adds a slight twist by converting all the words to uppercase text.

If your data source is a file rather than user input, you can use LINEIN to read and assign an entire line to a variable. Each call to LINEIN reads a successive line from the file.

In contrast, LINEOUT takes the value of a variable or a text string and writes it into a file.

NOTE: it is better to call LINEOUT as a subroutine rather than use it as a function (i.e., simply add the word CALL before LINEOUT, and remove the parentheses).

**Use BY and TO repetitors in
conditional loops to read and
write contents of files.**

How to do it:

• Code sample:

```
SAY 'What directory do you  
want to add to LIBPATH= ?'  
PULL AddDir
```

```
/* (C) */  
DO i=1 by 1 WHILE LINES  
(config.sys)  
line.i=LINEIN(config.sys)  
END
```

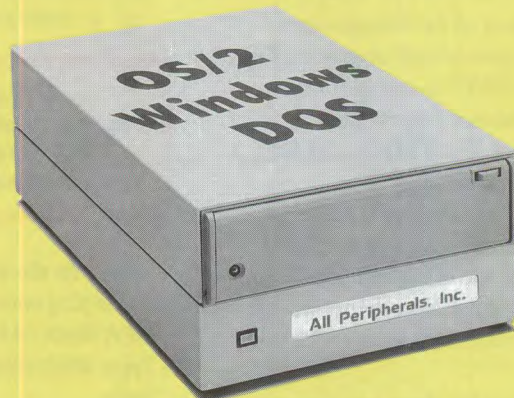
```
CALL stream  
'config.sys','C','CLOSE'  
/* Close file */  
/* (C.1) */  
line.0=(i-1)
```

• The next tip will add text manipulation instructions to this section.

```
/* (E) */  
DO i=1 to line.0  
CALL LINEOUT  
temp.fil,line.i  
END  
CALL stream
```

Q: Have you been praying for a OS/2 Parallel tape solution? A: API has Parallel Port Tape Systems for You.

- * 500MB Capacity
- * Speeds of up to 9.5 Mbytes/Min.
- * Supports PC/AT, PS/2 and 100% Compatibles
- * Sytos Plus for OS/2
(It is also IBM's choice)
- * Tandberg drives for quality in every bit
- * Supports OS/2, DOS, Windows, Novell, and IBM Lan Server
- * Tapes transferable between platforms
- * Runs unattended backups
- * 30 day money back guarantee
- * Technical Support Hotline
- * Call for a complete Product Line
250MB to 2GB
- * VISA Mastercard Accepted



All Peripherals, Inc.
250 Village Blvd., Suite 103
Incline Village, NV 89451
Tel (702) 885-2010
FAX (702) 885-2090
(800)-858-7537

Circle #78

TIPS AND TECHNIQUES

```
'temp.fil','C','CLOSE'  
/* Close file */
```

What the result is:

(C) → Checks whether any unread lines remain in the **CONFIG.SYS** file. If an unread line is available, the interpreter will execute the instructions in the **DO** loop.

As part of the loop, REXX reads one line at a time from the **CONFIG.SYS** file and puts it into a variable with a unique extension (line.1 = first line, line.2 = second, and so forth). Thus, the program creates a group of similarly-named variables which resembles an array. After the program finishes reading **CONFIG.SYS**, the last line of the section closes the file.

(C.1) → Assigns the number of loop iterations (i.e., the number of lines read from the **CONFIG.SYS** file) to the variable line.0 for further reference. (See the next step).

(E) → Resets i to 1 and iterates from 1 to the number of lines read from **CONFIG.SYS**.

As part of a loop, REXX writes one line at a time to the file **TEMP.FIL** from the array line.i. It then closes **TEMP.FIL** when done reading.

How you can use these instructions:

The **LINES()** function will return 1 if it finds any lines in the file beyond the read position. If the read position is at the end of the file, this function returns 0. That makes the **LINES()** function especially useful in connection with **DO WHILE** or **DO UNTIL** loops. These two loop statements evaluate whatever follows the statement as an expression.

The expression must evaluate to either 1 or 0 (you can think of these as true and false respectively). When the **LINES()** function returns a 1, the **DO**

WHILE loop executes its instructions; if **LINES()** returns a 0, REXX exits the loop and continues with the instruction following the **END** statement.

These procedures work well for simple file manipulations which can then be incorporated into a new file. File modification is but one of many possible tasks you can accomplish with REXX loops. For further discussion and other examples, see the section of the online REXX reference that discusses repetitive loops.

**For searching text strings
use the PARSE instruction.**

How to do it:

- Code sample:
Add user input and file reading code (sections C and C.1) from the previous tip to the following code.

The **GammaTech Utilities** are designed to enhance and complement your OS/2 system. These utilities provide the ability to perform vital maintenance and recovery operations easily without extensive technical knowledge. Use **GammaTech Utilities** for your critical data or you might lose it.

USE IT or LOSE IT

GammaTech Utilities for OS/2

- Undelete Erased Files
- Identify and Mark Bad Sectors
- Sort FAT Directories
- Add Comments to Files
- Optimize HPFS and FAT Volumes
- Reconstruct Boot Sectors
- View and Edit Selected Files
- Display File Fragmentation
- Backup INI and Desktop Files
- Protect/Lock Files
- Disk Sector Edit (ASCII or Hex)
- Display Directory Information
- Recover HPFS Volumes
- Permanently Erase Sensitive Data
- Display Volume Information
- SAA/CUA Compliant PM Interface
- Protect and Backup Boot Sectors
- Mass Delete Selected Files
- Alter File Attributes

For OS/2 Version 2

VISA, MasterCard, American Express, C.O.D. • Overnight Service Available

(405) 947-8080 • Fax (405) 632-6537
SofTouch Systems, Inc., Workstation Division
1300 S Meridian, Suite 600, Oklahoma City, Oklahoma 73108



Circle #98

TIPS AND TECHNIQUES

```
/* (D) This code will search
   for the line containing
   LIBPATH= */
/* and add the new directory
   to that line */
DO i=1 by 1 UNTIL
  pathinfo\=''
  PARSE var line.i
  "LIBPATH=" pathinfo
END
line.i=line.i||AddDir
Add the file writing instructions
(section E) from the previous tip.
```

What the result is:

REXX interpreter → Executes loop instructions once and checks to see if PARSE found the string "LIBPATH=" at the beginning of a line. If not, the loop continues; otherwise, the loop instruction assigns the contents of the line that follows LIBPATH= to a variable named "pathinfo."

REXX interpreter → After the loop completes, the variable line.i is modified to include the directory name typed by the user. (The two vertical line characters specify that the text strings this variable contains should be concatenated with no spaces between them.)

How you can use these instructions:

There are many different ways to use the PARSE instruction. This example is among the most basic. The PARSE instruction splits a string into words (any string separated by a blank space), according to specific templates (string patterns found within a string) or any combination thereof. See the online REXX info for further usage examples.

Some of the more commonly used REXX functions for searching, parsing or rearranging data include:

SYSFILESEARCH(), STREAM(),

CENTER(), LEFT(), RIGHT(), STRIP(), SUBSTR(), SUBWORD(), DELSTR(), DELWORD(), INSERT(), OVERLAY(), REVERSE() and TRANSLATE(). Each of these REXX functions is worth examining if you want to manipulate text or data with REXX. If you followed the advice from the first tip and added the REXX Info item to your desktop menu, the descriptions are just a few mouse clicks away.

Use this completed code (or write your own) to modify your CONFIG.SYS file quickly and reliably.

How to do it:

- Create a file called MODLIB.CMD for the following program:
/* This program will add

Maximize your computer's Control & Performance

- ▶ Gives power over DOS/Windows/LAN for OS/2 background Apps.
- ▶ Allows background prioritization ordering of all OS/2 programs in Full screen or Window mode.
- ▶ Unbelievable performance gains when heavy multitasking and/or memory overcommit scenarios (up to 1000 times faster background responses).
- ▶ Prescans the idle levels to insure that programs can run and has auto level seek and minimum usable priority defaulting.
- ▶ Online Help with program interaction analysis of mixing background OS/2 apps with DOS & Window apps. Also, Tips, Questions & Answers, and simple usability features display information and guide you along.
- ▶ 32 bit Presentation Manager Application - works on OS/2 2.0 & 2.1
- ▶ Volume discounts available. 30 Day money back guarantee.
- ▶ Priority Master I - Designed safe for the general public. \$79
- ▶ Priority Master II - Designed for the OS/2 professional developer. \$89

ScheduPerformance Inc.

3474 N. University Dr. • Suite 217 • Sunrise, Florida 33351

(305) 486-8299 • M-F 11:00AM to 8:00PM EST

Circle #126

TIPS AND TECHNIQUES

```
directories to the LIBPATH
of a CONFIG.SYS file. */
SAY 'What directory do you
want to add to LIBPATH= ?'
PULL AddDir
DO i=1 by 1 WHILE
LINES(config.sys)
    line.i=LINEIN(config.sys)
END
CALL STREAM
    'config.sys','C','CLOSE'
/* Close file */

line.0=(i-1)

DO i=1 by 1 UNTIL
pathinfo\=''
    PARSE var line.i
        "LIB PATH=" pathinfo
END

line.i=line.i||AddDir
```

```
DO i=1 to line.0
    CALL LINEOUT
        temp.fil,line.i
END
CALL STREAM
    'temp.fil','C','CLOSE'
/* Close file */

'COPY CONFIG.SYS CONFIG.BAK'
'ERASE CONFIG.SYS'
'REN temp.fil CONFIG.SYS'

SAY 'The LIBPATH of the con-
fig.sys has been updated.
You must'
SAY 'reboot to allow changes
to take effect.'

EXIT
```

As you can see from these brief tips on REXX programming, this erstwhile batch language has real potential. If you

need the power of REXX, but cringe at the thought of writing lines of programming code, you should take a look at two additional tools available for REXX development. VX-REXX by Watcom and VISREXX by Hockware are visual programming tools based on REXX. These tools can help you develop commercial grade GUI applications for OS/2 at reasonable prices. ♦

If you have worked with REXX code and have a favorite routine or tricky implementation of the built-in REXX functions, share it with OS/2 Professional readers by sending it through internet to GSCOTT at STLVM22.VNET. IBM.COM. Gordon Scott can also be reached during normal PST business hours at (408) 463-4483.

Bring Mark Minasi & Company to Your Site for Quality Advanced Operating System Education

Life After DOS: Examining OS/2 2.1, Windows 3.1 and DOS 6.0

A strategic overview for managers trying to make the operating system decision.

Some experts think OS/2 2.1 and Windows NT will replace DOS in the near future. Others aren't so sure. One thing is certain: all the operating system options out there are tremendously confusing—and the fast paced changes in this area make it just about impossible to keep up. Industry expert Mark Minasi follows this business full-time, and just two days with him can save you time and money later. In this seminar, you'll hear an unbiased viewpoint based on actual Windows and OS/2 experience. You'll get the most up-to-date facts you need to make informed buying decisions, and you'll learn what to do with OS/2 and Windows once you have them. And you'll hear the latest on WOS, Taligent, Chicago, DOS 7 and Cairo!

Using/Supporting OS/2

Two comprehensive seminars by Mark Minasi, author of the #1 best seller: Inside OS/2

Two seminars to help your users get the most from OS/2 2.0/2.1 and get your support people up to speed *immediately* on this essential operating system. Learn to support and optimize OS/2 in just two days. Seats may still be available in our October 12 & 13 Washington, DC class—call now!

We offer unmatched technical expertise in advanced operating systems. Call Donna Cook, our Marketing Director, to receive a detailed outline: she can supply whatever information you need.

(703) 276-8940

Circle #21

WATCOM™ VX•REXX™

Visual Development Environment For OS/2 REXX

WATCOM VX•REXX is an easy to use visual development environment for creating applications that leverage the capabilities of OS/2 2.x and exploit the Presentation Manager graphical user interface. VX•REXX combines a project management facility, visual designer and an interactive source-level debugger to deliver a very approachable and highly productive visual development environment.

Design Applications Visually Create rich graphical applications quickly and easily using the visual design environment. With the visual designer, you can graphically create Presentation Manager interface objects, quickly customize their properties, and easily attach REXX procedures to the objects.

Integrated Development Environment Build, test and debug your application without leaving the development environment. Then package your application as an EXE file or PM macro for royalty-free redistribution. The power of the integrated development environment and debugger can also be used with your existing REXX applications.

Powerful Open Environment Enjoy the simplicity of event-driven programming together with the global editing capabilities essential for professional project management. WATCOM VX•REXX is open and extensible through IBM's object oriented System Object Model (SOM) technology. You can access all standard REXX API's including DB Manager, because VX•REXX is based on the OS/2 2.x standard system REXX.

Interactive Debugging

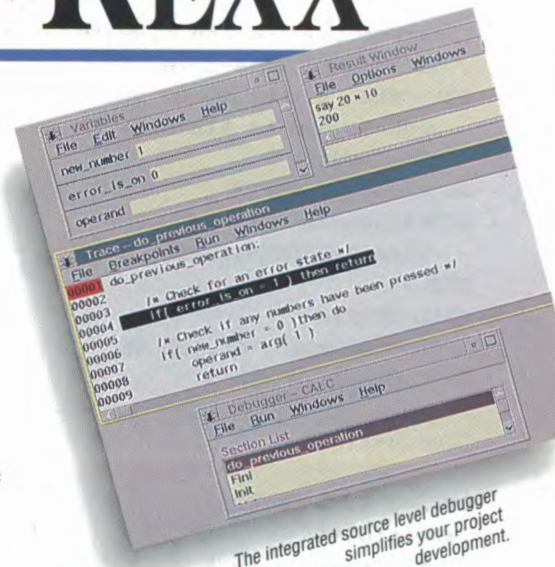
If an error occurs at run-time, VX•REXX will display a traceback pinpointing the source line where the error occurred. A simple click of the mouse will return you to the source edit window to correct the error. The built-in interactive source-level debugger lets you set breakpoints, step through code and watch variables to track down complex problems.

Build Professional Applications

WATCOM VX•REXX allows you to leverage key OS/2 features to create professional applications. Build applications that dynamically create and modify CUA'91 screen objects at both edit and run-time, and include OS/2 style help and hints.

Create Multi-Threaded Applications

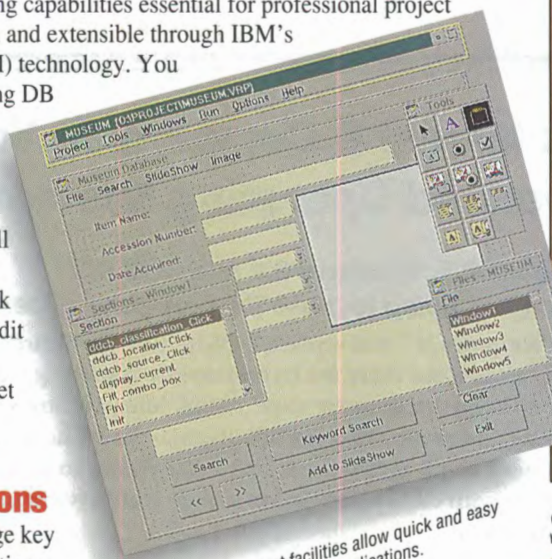
Every VX•REXX application contains multiple threads. One thread remains responsive to user input while others continue processing. In addition, VX•REXX provides the ability for advanced applications to easily use additional threads.



The integrated source level debugger simplifies your project development.

Highlights

- ▶ Easy to use visual development environment
- ▶ Create and modify objects dynamically at both edit and run time
- ▶ Powerful project management facility
- ▶ Advanced interactive source-level debugger
- ▶ Package your applications as EXE files or PM macros
- ▶ Access to standard REXX API's including DB Manager
- ▶ System Object Model (SOM) based object manager
- ▶ Support for multi-threaded applications
- ▶ Include OS/2 style help and hints in your applications
- ▶ Supports SAA CUA'91 objects
- ▶ Autosizing and alignment of objects
- ▶ Integrated console window support for existing REXX programs
- ▶ Royalty-free run-time available
- ▶ Multiple modeless window support
- ▶ Create PM macros for applications supporting REXX as a macro language



Project management facilities allow quick and easy development of your OS/2 applications.

Suggested Retail: \$299*

Introductory Offer \$99*

(until September 30, 1993): includes royalty-free runtime

WATCOM

**Call Toll Free
1-800-265-4555**

WATCOM International

415 Phillip Street, Waterloo, Ontario, Canada, N2L 3X2
Phone: (519) 886-3700 Fax: (519) 747-4971

Circle #100



The Information Presentation Facility

Part III: Containers, Views and More Threads

BY TODD B. CROWE

This is the third in a series of articles on Presentation Manager (PM) programming designed to help those with little or no previous PM programming experience. The first article, which appeared in Volume 1, Number 2, presented a very simple, yet functional, PM program. The original program illustrated the basic anatomy of a PM program and described the fundamental differences between procedural and event-driven programming.

In the second installment (Volume 1, Number 4), we added useful functionality by opening and displaying text files through a multithreaded design that ensured robustness and responsiveness. Yet, despite the multithreaded design, the first two versions were easily adaptable to OS/2 version 1.3. In this article, we'll further modify the original program to bring it solidly into the realm of OS/2 2.x.

The second version of this program used the `WinFileDlg()` function to obtain a file name from the user. The `WinFileDlg()` function presents a dialog box that lists all of the available files in one listbox and all of the available directories in another. While listboxes may always have a place in a programmer's GUI toolbox, they do not integrate well with a modern, object-oriented user interface such as the Workplace Shell. In OS/2 2.x, the preferred control for displaying lists of objects is the container.

In its simplest form, a container looks very much like a listbox. It is, after all, a derivative of the listbox. However, containers supply much more functionality than listboxes (the most notable improvements include the ability to display data using several different views and full support for drag and drop operations).

To see an example of a container, take a look at any folder on the OS/2 desktop. The **Open** menu item offers three views: **Icon**, **Tree** and **Details**. The **Icon** and **Tree** views are primarily graphical, showing icons and titles only, while the **Details** view uses a columnar, text-oriented format with additional data such as size, last access date, creation date and attribute flags. All three views are based on a single container definition.

LISTING 1

```
#define INCL_PM      // include all PM constructs
#define INCL_DOS     // include all base o/s constructs

#include <os2.h>
#include <stdio.h>
#include <memory.h>
#include <stddef.h>
#include <errno.h>
#include <malloc.h>
#include <string.h>
#include <process.h>

#include "dos2pm.h"

/*
    CONSTANTS
*/
#define DEFAULT_VIEW      ID_VIEW_TREE
                        // default container view
#define FINDBUFF_ENTRIES  10
                        // find buffer entry count
#define CNRREC_SIZE       (sizeof(CNRREC)-
                        sizeof(MINIRECORDCORE))

/*
    DATA DEFINITIONS
*/

typedef struct _CNRREC     // container item record
{
    MINIRECORDCORE mrc;    // record struct
    char szFileName[CCHMAXPATH]; // file name
    ULONG ulSize;          // size
    CDATE Date;           // date
    CTIME Time;           // time
    ULONG ulAttr;          // attributes
}
CNRREC;

typedef struct _GLOBALDATA // global program data
{
    HAB hab;              // anchor block handle
    HMq hmq;              // message queue handle
    HWND hFrame,          // frame window handle
        hClient,          // client window handle
        hMenu,            // application menu handle
        hContainer;       // container window handle
}
```


CODE CACHE

```
RECTL    rclUpdate;    // window update rectangle
char     *pszText[MAXLINES];

short    sLineCount,   // screen buffer line count
         sCharHeight,  // character height
         sTopLine;     // index of top visible line

char     szFileName[CCHMAXPATH];
         // input file name

short    sCloseFile;   // abort flag
char     szCurrDir[CCHMAXPATH];
         // current directory

USHORT   usView;       // current view id
}
GLOBALDATA;

/*
```

FUNCTION PROTOTYPES

```
*/
int       cdecl    main(int, char **);
static    HWND     CreateWindow(GLOBALDATA *);
static    MRESULT   EXPENTRY
            ClientWndProc(HWND, ULONG,
                           MPARAM, MPARAM);
static    MRESULT   ClientWndInit(HWND, GLOBALDATA *);
static    void      FileOpen(HWND, GLOBALDATA *, char *);
static    void      FileClose(HWND, GLOBALDATA *);
static    void      ReadFileThread(void *);
static    void      FillContainerThread(void *);
static    void      CalcLinePosition(HWND, GLOBALDATA *,
                                     short, RECTL *);
static    HWND      CreateContainer(HWND, GLOBALDATA *);
static    ULONG     FillContainer(HWND, CNRREC *, char *);
static    void      SetView(HWND, GLOBALDATA *, USHORT);

/*
```

MAIN()

```
*/
#pragma argsused
int cdecl main(int argc, char **argv)
{
    QMSG      qmsg;
    GLOBALDATA GlobalData;

    memset(&GlobalData, 0, sizeof(GlobalData));

    /* Initialize PM */

    GlobalData.hab = WinInitialize(0);

    /* Create a PM message queue. */

    GlobalData.hmq = WinCreateMsgQueue
        (GlobalData.hab, 0);

    /* Register the client window class. */

    if (WinRegisterClass(GlobalData.hab, CLASSNAME,
                        ClientWndProc, CS_SIZEREDRAW,
                        sizeof(GLOBALDATA *)))
    {
        /* Create the frame and client windows. */
    }
}
```

Implementing the Container Control

To demonstrate the basic capabilities of the container control, we will replace the **WinFileDialog()** function from the second version with a container. Though this sounds simple, such a modification will require extensive changes throughout the program, including the addition of a third thread.

Listing 1 shows the new main program along with its window procedure and support functions. No changes were required to the logic involved in reading the file or painting the screen, since only the method of obtaining the input file is changing. Note, however, that we have added a new data structure, **CNRREL**, along with the new code in the client window procedure to handle several new messages. (See listing 1 page 61.)

The container control requires a **RECORDCORE** or **MINIRECORDCORE** data structure to describe each of the objects your application inserts into the container. You make your choice of data structures when you create the control. If you need to store private application data for each object, you can allocate additional storage along with each **RECORDCORE** or **MINIRECORDCORE** structure.

This approach is similar to the implementation of Window Words (which store private application data associated with each instance of a window). Unlike Window Words, however, the container requires you to store your data contiguous with the **PM** data structure rather than providing separate storage for a pointer.

In order to accommodate this approach, we define the **CNRREL** structure with the **MINIRECORDCORE** structure as the first element, which makes the address of **CNRREL** and its first element identical. The remaining elements in the **CNRREC** structure are for our use and **PM** pays no attention to them.

The new messages the client window procedure must handle are the **WM_SIZE** and **WM_CONTROL** messages, plus a new user-defined message, **UM_CNRFILLDONE**. Furthermore, because we've added the **View** menu item, five new command codes must be handled under the **WM_COMMAND** message. However, these cases are of little concern here since we just pass the command identifier to the **SetView()** function for handling.

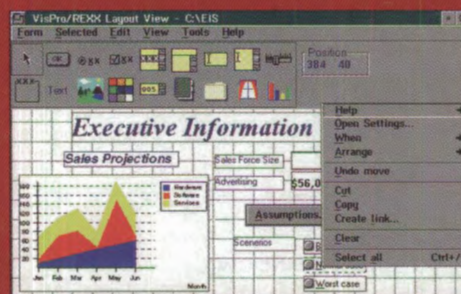
In response to the **WM_SIZE** message, the program resizes the container, if it exists, because this application sizes the container to match the client window. The program must check the container window handle throughout the program since the

For OS/2 2.x

UNLEASH THE POWER OF VISPRO/REXX™

VisPro/REXX is an easy-to-use visual programming environment that gives you the power to create your own OS/2 2.x GUI applications. Fast.

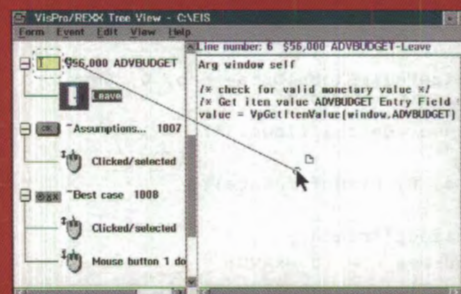
VisPro/REXX features the inherent advantages of Presentation Manager, the OS/2 2.x Workplace Shell, the Common User Access (CUA) '91 user interface and the REXX programming language.



**Design
Your Layout**

VisPro/REXX offers easy access to OS/2 programming features, including buttons, lists, sliders, charts, business graphics, DB2/2, APPC and HLLAPI.

Best of all, you don't have to be a REXX expert to use VisPro/REXX: the drag and drop programming feature creates the REXX statements for you.



**Drag and
Drop to
Build Your
Program**

With VisPro/REXX, you can quickly develop OS/2 CUA '91 applications, build client server programs and generate a single .EXE file of your masterpiece for royalty-free distribution.

UNLEASH YOUR POWER TODAY!

\$299
Introductory Price

\$99
Bronze Edition

System Requirements:
OS/2 2.x, 5Mb memory and
1.5Mb hard disk space.

HockWare, Incorporated
P.O. Box 336, Cary, NC 27512-0336
Fax (919) 380-0757 Phone (919) 380-0616

HockWare™
Putting You in Control

VisPro/REXX is a trademark of HockWare, Incorporated.
OS/2, DB2/2, CUA and Workplace Shell are registered trademarks of International Business Machines Corporation.
© 1993 HockWare, Incorporated. All rights reserved.

CODE CACHE

```

if (CreateWindow(&GlobalData))
{
    /* Dispatch messages until a WM_QUIT message
    is received. */

    while (WinGetMsg(GlobalData.hab, &qmsg,
        NULLHANDLE, 0, 0))
        WinDispatchMsg(GlobalData.hab, &qmsg);
}

/* Destroy the message queue. */
WinDestroyMsgQueue(GlobalData.hmq);

/* Terminate use of PM and release all resources. */
WinTerminate(GlobalData.hab);

return (0);
}

/*
CREATEWINDOW()
*/
static HWND CreateWindow(GLOBALDATA *pGlobalData)
{
    FRAMECDATA fcddata;
    HWND hFrame;
    hClient;
    SWP swp;

    /* Ask PM for a default size and position for
    the window. */

    WinQueryTaskSizePos(pGlobalData->hab, 0, &swp);

    /* Set the frame control flags. */

    memset(&fcddata, 0, sizeof(fcddata));

    fcddata.cb = sizeof(fcddata);
    fcddata.idResources = ID_FRAME;
    fcddata.flCreateFlags=FCF_SIZEBORDER | FCF_SYSMENU |
        FCF_MENU | FCF_MINMAX |
        FCF_TITLEBAR | FCF_TASKLIST;

    /* Create the frame window as a child of the
    desktop window. */

    hFrame = WinCreateWindow(HWND_DESKTOP, WC_FRAME,
        NULL, FS_TASKLIST |
        FS_SIZEBORDER, 0, 0, 0, 0,
        HWND_DESKTOP, HWND_TOP,
        ID_FRAME, &fcddata, NULL);

    pGlobalData->hFrame = hFrame;

    /* Obtain a handle to the application menu window.
    */

```

container is created only when the user selects the **File-Open** menu item. The program then destroys the container after a file is selected.

When the **FillContainerThread()** function finishes filling the container, it posts a user-defined message named **UM_CNR-FILLDONE** to the client window. At this point the program should set the current view, enable the **View** menu item and make the container visible.

Though some would disagree with this approach, I prefer to keep listboxes and containers hidden while they are being filled. If, on the other hand, you would rather watch the container fill, simply use the **WS_VISIBLE** style when creating the container and remove the calls to **WinShowWindow()**. (Notice that we also call **WinSetFocus()** to give the focus to the container after it has been filled. This ensures that keystrokes intended for the container are passed to the container window procedure rather than to the client window procedure.)

A generic message, **WM_CONTROL**, notifies a window's owner of significant events. The meaning of the message depends on the window class that generated it and an event code passed with the message. Every class of window generates its own unique set of event codes.

Containers generate a number of **WM_CONTROL** messages, but the only event currently of interest to our application is **CN_ENTER**. This indicates that the user selected an object and pressed the Enter key, or double-clicked it with the mouse—an action that generally means “open the object.” Since the container supplies the methods for displaying subdirectories, it's not necessary to act if the object is a directory; but if it's not a directory, the program calls **FileOpen()** to prepare for viewing the file and then destroys the container.

Listing 2 (page 72) shows the remaining functions from the original program. As a matter of convenience we've placed the logic for creating the container in the **FileOpen()** function. If the file name pointer is null, **FileOpen()** creates the container control and returns immediately. This is the only change made to that function (and those that follow). Take note, however, of the call to **_beginthread()**.

This program was compiled using Borland C++ for OS/2, and unlike IBM's C Set/2, the Borland version of **_beginthread()** does not accept a stack pointer. While the C Set/2 version gives you the option of supplying a stack or allowing **_beginthread()** to allocate one automatically, the Borland version always allocates a

Mission



IBM Programming Systems introduces C Set++,™ the most complete application development package you can buy for OS/2.® Its 32-bit C/C++ compiler lets you unleash all the power of OS/2 — so you can create the most advanced, high-performance applications.

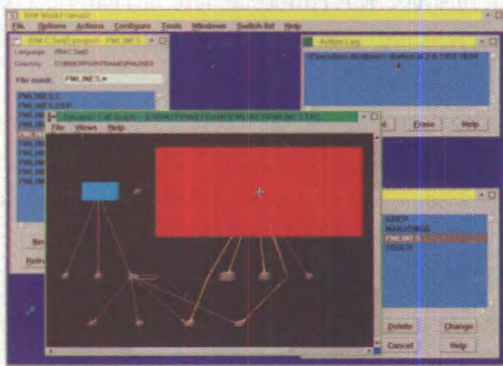
It has an extraordinary code optimizer with a full set of options. Even a switch to optimize for the new Pentium™ processor. Plus a full set of class libraries, including application frameworks for PM, container classes and classes for multitasking, streams and more.

There's also a full complement of other helpful features. Such as an interactive source level debugger.



And the unique Execution Trace Analyzer traces the execution of a program, then graphically displays diagrams of the analysis. Plus a class library browser that shows class library relationships.

What's more, you get Workframe/2,™ a language-independent tool that lets you customize your own environment. It's adaptable and flexible — you can use any 16 and 32-bit DOS, Windows™ and OS/2 tools.



To order C Set++, contact your nearest dealer or call 1-800-342-6672 (USA) or 1-800-465-7999 ext. 460 (Canada).

Clearly, there's only one place to start. C Set++.

critical code

C Set ++ Technical Features

Standards	ANSI C X3.159-1989
	NIST validated
	ANSI C++ X3J16 (Full ARM)
	ISO 9899:1990
Optimization	Global
	Inter-module
	Function inlining
	Instruction scheduling

starts here.



IBM and OS/2 are registered trademarks and C Set++ and Workframe/2 are trademarks of International Business Machines Corporation. Pentium is a trademark of Intel Corporation. Windows is a trademark of Microsoft Corp. © 1993 IBM Corp.

CODE CACHE

```

pGlobalData->hMenu =
    WinWindowFromID(hFrame, FID_MENU);

/* Create the client window as a child of the
frame window. */

hClient=WinCreateWindow(hFrame, CLASSNAME, NULL, 0,
    0, 0, 0, 0, hFrame,
    HWND_BOTTOM, FID_CLIENT,
    pGlobalData, NULL);

pGlobalData->hClient = hClient;

/* Activate, size, and position the window. */

WinSetWindowPos(hFrame, HWND_TOP, swp.x, swp.y,
    swp.cx, swp.cy,
    SWP_SIZE | SWP_MOVE | SWP_SHOW |
    SWP_ACTIVATE | SWP_ZORDER);

return (hFrame);
}

/*
CLIENTWNDPROC()

*/
static MRESULT EXPENTRY ClientWndProc(HWND hwnd, ULONG
    msg, MPARAM mp1,
    MPARAM mp2)
{
    int            i;
    short          sError;
    char           *psz,
    szErrBuff[128];
    GLOBALDATA     *pGlobalData;
    HPS            hps;
    RECTL          rcl,
    rclText;
    MRESULT        mr;
    USHORT         id;
    CNRREC         *pcr;
    CNRINFO        cnri;
    NOTIFYRECORDENTER *pnre;

    switch (msg)
    {
        case WM_CREATE:
            pGlobalData = (GLOBALDATA *)PVOIDFROMMP(mp1);
            return (ClientWndInit(hwnd, pGlobalData));

        case WM_CLOSE:
            /* Check to see if a file is currently open by
            querying the state of the file-close menu item.*/

            pGlobalData =
                (GLOBALDATA *)WinQueryWindowPtr(hwnd, 0);

            mr =
                WinSendMsg(WinWindowFromID
                (pGlobalData->hFrame,
                    FID_MENU), MM_QUERYITEMATTR,

```

stack for you. If you are using C Set/2, you'll need to add a null stack pointer to the `_beginthread()` function call.

New Functions

Listing 3 (page 74) includes the new functions we've added to the program to handle the tasks of creating, filling and setting the viewing mode of the container. The `CreateContainer()` function performs the tasks of creating the container window, defining the columns used in the **Details** view and then starting a thread to fill the container. Unlike other simpler controls, which often require little more than a few bit flags, the complexity of the container control requires an entire data structure to describe virtually every available option and operation.

`CreateContainer()` begins by obtaining the dimensions of the client window in order to size the container. It then creates the container window with a call to `WinCreateWindow()`. The `CCS_MINIRECORDCORE` style flag informs the container that we'll be using `MINIRECORDCORE` structures rather than the larger, more complex `RECORDCORE` structures to describe objects within the container. It's important to be consistent about our choice of data structures since we'll be passing pointers back and forth between these structures and we must agree with PM on the size of the item we're dealing with.

After creating the container, we define the columns that will appear in the **Details** view. First, send a `CM_ALLOCDE-TAILFIELDINFO` message to the container. In response to this message the container will allocate a linked list of `FIELDINFO` data structures and return a pointer to the root item of the list.

The first message parameter for this message specifies the number of columns, and thus defines how many entries will be in the linked list. The container initializes the `pNextFieldInfo` field of each entry in order to form the linked list, so it's important not to alter this field. The `pNextFieldInfo` pointer will be set to null in the last entry (to signal the end of the list).

To define the columns for the **Details** view, set the remaining fields in each linked list entry. Most of these fields are self-explanatory. The `offStruct` field, however, deserves some attention. This field must be set to the offset within the `CNRREC` structure of the field that contains the actual data to display in the column. For example, the first column in the **Details** view is an icon. The container knows this because we set the `CFA_BITMAPORICON` attribute flag in the `fldData` field.

The container will need an icon handle in order to display data

CODE CACHE

```

        MPFROM2SHORT(ID_FILE_CLOSE, TRUE),
        MPFROMSHORT(MIA_DISABLED));

if (LONGFROMMR(mr) != MIA_DISABLED)
{
    if (WinMessageBox(HWND_DESKTOP, hwnd,
        "Close file and exit?",
        "File is open",
        0, MB_YESNO | MB_ICONQUESTION)
        == MBID_YES)
        FileClose(hwnd, pGlobalData);
    else
        return (MRFROMSHORT(0));
}
WinPostMsg(hwnd, WM_QUIT, 0L, 0L);
return (MRFROMSHORT(0));

case WM_PAINT:
    pGlobalData =
        (GLOBALDATA *)WinQueryWindowPtr(hwnd, 0);
    hps = WinBeginPaint(hwnd, NULLHANDLE, &rcl);
    WinFillRect(hps, &rcl, SYSCLR_WINDOW);

    /* Calculate the coordinates of the first line
    of text on the screen. */

    CalcLinePosition(hwnd, pGlobalData,
        pGlobalData->sTopLine,
        &rclText);

    /* Now paint every line from the top visible line
    to the last line. PM will automatically clip any
    drawing that falls outside of the update area. */

    for (i=pGlobalData->sTopLine;
        i<pGlobalData->sLineCount; i++)
    {
        WinDrawText(hps, -1, pGlobalData->pszText[i],
            &rclText, SYSCLR_WINDOWTEXT,
            SYSCLR_WINDOW, DT_LEFT);

        rclText.yBottom -= pGlobalData->sCharHeight;
        rclText.yTop -= pGlobalData->sCharHeight;
    }

    /* Reset the update rectangle. */

    pGlobalData->rclUpdate = rclText;
    pGlobalData->rclUpdate.yTop =
        pGlobalData->sCharHeight;
    pGlobalData->rclUpdate.yBottom = 0;

    WinEndPaint(hps);
    return (MRFROMSHORT(0));

case WM_SIZE:
    /* Resize the container window if present. */

    pGlobalData =
        (GLOBALDATA *)WinQueryWindowPtr(hwnd, 0);
    if (pGlobalData->hContainer)
        WinSetWindowPos(pGlobalData->hContainer,
            NULLHANDLE, 0, 0,
            SHORT1FROMMP(mp2),
            SHORT2FROMMP(mp2),

```

SQL Objects++TM for OS/2

Database Class Library

SQL Objects++ Database Class Library gives you *full* access to SQL and non-SQL databases:

- Oracle
- Sybase
- SQL Server
- DB2
- Netware SQL
- Btrieve
- IBM DDCCS/2 (SQL/400, SQL/DA)*
- More...

No longer are you restricted to the lowest common denominator factor when developing for multiple databases. Now you can take full advantage of each vendors SQL extension or add your own through the power of inheritance.

SQL Objects++ Database Class Library has broken the language barrier. You now can take advantage of object-oriented power through non-object-oriented languages. SQL Objects++ Database Class Library feature rich classes can be access by:

- C++ (IBM C Set++)
- System Object Model (C,C++ or any language that supports SOM bindings)*

NO RISK. Use it for 30 days and if your not satisfied, return it for a full refund. Order today for only \$499 and begin experiencing the power of SQL Objects++ Database Class Library **ROYALTY FREE.**

**SPECIAL
\$249**

offer expires October 31, 1993

GSI Graphical
Software
Interfaces, Inc.

47 Stonewall Street Cartersville, GA 30120

Sales: (800) 876-6585

(404) 382-6585 - fax (404) 382-6374

OS/2, SOM are registered trademarks of International Business Machines, Corp. SQL Objects++ is a trademark of Graphical Software Interfaces, Inc. *Available 30 days after SOM toolkit and IBM DDCCS/2 version 2 ships.

Circle #112

CODE CACHE

```

        SWP_MOVE | SWP_SIZE);
break;

case UM_LINEOFTEXT:
    /* This is a user-defined message posted by
    the file input thread. mpl contains a pointer
    to an array of text to be displayed. */

    pGlobalData =
        (GLOBALDATA *)WinQueryWindowPtr(hwnd, 0);

    /* Save the data in the screen buffer. */

    if (pGlobalData->sLineCount < MAXLINES)
        pGlobalData->sLineCount++;
    else
    {
        /* buffer is full, discard top line to
        make room */

        free(pGlobalData->pszText[0]);

        for (i = 0; i < pGlobalData->sLineCount-1; i++)
            pGlobalData->pszText[i] =
                pGlobalData->pszText[i+1];
    }
    pGlobalData->pszText[pGlobalData->sLineCount-1] =
        (char *)PVOIDFROMMP(mpl);

    /* Calculate the position of the new line
    of text. If it's below the bottom of the
    screen, scroll the window. */

    CalcLinePosition(hwnd, pGlobalData,
        pGlobalData->sLineCount-1,
        &rclText);

    if (rclText.yBottom <= 0)
    {
        if (pGlobalData->sLineCount < MAXLINES)
            pGlobalData->sTopLine++;

        WinScrollWindow(hwnd, 0,
            pGlobalData->sCharHeight, NULL,
            NULL, NULLHANDLE, NULL, 0);

        /* Add the space vacated by the bottom line to
        the update rectangle. */

        pGlobalData->rclUpdate.yTop +=
            pGlobalData->sCharHeight;
    }
    else
        pGlobalData->rclUpdate = rclText;

    /* Tell PM to repaint the invalidated area. */

    WinInvalidateRect(hwnd, &pGlobalData->rclUpdate,
        FALSE);

    return (MRFROMSHORT(0));

case UM_ENDOFFILE:
    /* This is a user-defined message posted by the
    file input thread indicating end-of-file.

```

in the first column. We therefore set the **offStruct** field to the offset of the **hptrIcon** field in the **MINIRECORDCORE** structure (which is the first element of our **CNRREC** structure). Similarly, the second column contains a file name. The container knows it should display a text string because of the **CFA_STRING** attribute. Although our **CNRREC** structure includes an array that contains the file name, the container expects a pointer to the array, rather than the contents of the array itself.

In order to supply a pointer to the text string we supply the offset to the **pszIcon** field. When the system fills the container, this pointer will be set to point to the file name buffer. If we had given the offset of the file name buffer itself, the container would attempt to use the first four bytes of the text string as a pointer. Obviously this would not work. This pointer logic is a little strange perhaps (and definitely error-prone), but such is the price of highly flexible, multi-purpose data structures.

The remaining columns in the container are the file size, date and time. The file size is simply a long integer which the container will display as it would any integer value. The date and time use specific structures that the container understands as date and time values. These structures, **CDATE** and **CTIME** respectively, are defined in the **PMSTDDL.H** header file. When all of the **FIELDINFO** data structures have been initialized, a second structure, **FIELDINFOINSERT**, is initialized and passed to the container along with the root pointer to the **FIELDINFO** linked list using the **CM_INSERTDETAILFIELDINFO** message. The final task is to create a vertical splitbar to the right of the file name field by using the **CM_SETCNRINFO** message and the **CNRINFO** data structure.

Filling the Container

After the **Details** view columns have been defined, it's time to fill the container. Since this requires traversing the entire directory tree below the current directory, the issue of lengthy delays arises—particularly if the current directory is on removable media, on a server or the base of a very deep and extensive directory tree. Therefore, we will use another thread represented by the **FillContainerThread()** function to fill the container. This approach is similar to that used for reading input files with one major difference: **FillContainerThread()** requires a **PM** message queue. Message queues are thread specific, so the main **PM** thread's message queue will not suffice.

The **FillContainerThread()** function requires a message

CODE CACHE

queue because it uses `WinSendMsg()` to insert items into the container. Although it may seem odd at first glance, the rules allow a thread to use `WinPostMsg()` without a message queue of its own, but require a thread-specific message queue to use `WinSendMsg()`. The crux of the matter lies in the return values. `WinSendMsg()` uses the *sender's* message queue for returning results from the `WinSendMsg()` call. `WinPostMsg()` doesn't return results from the recipient, and thus doesn't require a queue from the sender.

Although `FillContainerThread()` creates a message queue, notice that it does not service the queue with `WinGetMsg()` and `WinDispatchMsg()`. Such processing isn't necessary since, strictly speaking, this isn't a PM thread and it won't be receiving messages. The message queue serves only as a mechanism for using `WinSendMsg()`.

Filling the container is accomplished by the `FillContainer()` function, which handles the task of filling the container. The function performs a directory search using the `DosFindFirst()` and `DosFindNext()` functions, which are nearly identical to their DOS counterparts. `DosFindFirst()` initiates a directory search and returns a batch of file names that meet the search criteria. `DosFindNext()` returns the next batch of file names until the search is completed.

For each batch of file names returned, we allocate an array of `CNRREC` structures, initialize each entry with the file information and then send the `CM_INSERTRECORD` message to the container to insert the entire batch in one fell swoop. After inserting a batch of files into the container, we go back through the list of files again and search for directories. When a directory is found, we recursively call `FillContainer()` with the directory name and a pointer to the `CNRREC` structure corresponding to the directory.

Since `FillContainer()` is recursive, it's important to minimize its stack requirements by dynamically allocating large data items (such as the file find buffer and search path array) rather than declaring them as local variables. Furthermore, you should supply the program with a fairly large stack.

A stack size of 10KB will accommodate reasonably deep directory trees. Increasing that to 20-30KB should handle even the most pathologically deep directory tree. (Before you wince at stack requirements of this magnitude, remember that this is not DOS—OS/2 can accommodate such memory requirements with

Now Shipping....

NDP OS/2 2.1 Developer's Pack

\$595 Includes:

- 32-bit Globally Optimized Code
- 32-bit Graphics and API Access
- IBM Toolkit and Workframe
- Integrated Development Environment
- 1500 pages of documentation
- Your Choice of Compiler:

**NDP C/C++, NDP Fortran-77
or NDP Pascal**

*Call for our White Papers on OS/2, i860
Parallel Processing on PCs, Fortran 90 and
our port of LAPACK to the 486 and i860.*

Microway®
Circle #96

Research Park, Kingston, MA 02364 USA (508) 746-7341
U.K., 081-541-5466 USA FAX (508) 746-4678

POWERMAP VERSION 1.1

PROCESS DOCUMENTATION AND FLOWCHARTING TOOL FOR BUSINESS PROCESS RE-ENGINEERING

- Transforms "invisible" business processes into visual flow charts.
- User consultation captures real information about how the work is actually done.
- All process information is stored in IBM Database Manager (DB2/2) SQL Tables.
- Documents tasks, routing activities, parallel tasks, gotos, decision points, inputs, outputs, customers, suppliers, doers, sub-processes, macro processes, process mission statements, and termination points.
- Automatically draws the flowchart with time and doer relationships.
- Calculates process activity by doer, separates work and wait activity time.
- Multi-thread 32-bit architecture provides a responsive user interface.

For pricing inquiries and a list of client/server consultant services contact:

INVICTUS SYSTEMS CORPORATION

5268 Lyngate Court, Burke, VA 22015
Phone (703) 503-8060 Fax (703) 503-8064
Circle #85

CODE CACHE

```
mpl contains an error code. If an error occurred,
display a dialog box with an error message. */

pGlobalData =
    (GLOBALDATA *)WinQueryWindowPtr(hwnd, 0);

sError = SHORT1FROMMP(mpl);
if (sError)
{
    /* Notify the user. */

    sprintf(szErrBuff, "Error %d accessing %s.",
        sError, pGlobalData->szFileName);
    WinMessageBox(HWND_DESKTOP, hwnd, szErrBuff,
        "ERROR!", 0,
        MB_OK | MB_ICONEXCLAMATION);

    /* Do cleanup. */

    FileClose(hwnd, pGlobalData);
}
return (MRFROMSHORT(0));

case UM_CNRFILLDONE:
    /* The container is filled...
    mpl contains the file count */

    if (mpl)
    {
        pGlobalData =
            (GLOBALDATA *)WinQueryWindowPtr(hwnd, 0);

        /* Set the view */

        SetView(pGlobalData->hContainer,
            pGlobalData, DEFAULT_VIEW);

        /* Enable the VIEW menu item */

        WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
            MPFROM2SHORT(ID_VIEW, TRUE),
            MPFROM2SHORT(MIA_DISABLED, FALSE));

        /* Make it visible & give it the focus */

        WinShowWindow(pGlobalData->hContainer, TRUE);
        WinSetFocus(HWND_DESKTOP,
            pGlobalData->hContainer);
    }
    return (MRFROMSHORT(0));

case WM_CONTROL:
    pGlobalData =
        (GLOBALDATA *)WinQueryWindowPtr(hwnd, 0);

    /* Switch on the control sending the message */

    switch (SHORT1FROMMP(mpl))
    {
        case ID_CONTAINER:

            /* Switch on the event code sent by
            the container */

            switch (SHORT2FROMMP(mpl))
```

ease, and you shouldn't hesitate to allocate large blocks when appropriate.)

Wrapping it Up

The final function in the program is `SetView()`. `SetView()` establishes the current viewing mode and title for the container. This fairly straightforward operation requires another `CM_SETCNRINFO` message with the window attributes set to indicate the desired viewing mode. If the view is an **Icon** view, the container must be told to arrange the icons by sending a `CM_ARRANGE` message. While you could omit the message by having the container arrange automatically, your application will usually perform better if it determines when arrangement is required. The final step in this procedure sets a check mark on the **View** menu item currently in effect.

Listings 4 through 7 (page 79) show the header file, resource file, make file and definitions file for the application, thus completing the files necessary for building this program. The definitions file specifies a stack size for the program, something that could also be set through a command line switch to the linker. The make file, which is tailored to Borland's C++ for OS/2, will require modification if you use another compiler and linker.

Summary

As you can see, object-oriented features in OS/2's Workplace Shell can ease the programming burden while providing a consistent look and feel between various applications. Although older PM programs may require some significant changes to take advantage of features such as containers, the results will be worth the investment of programming time. For newly-designed applications, the object-oriented features in OS/2 2.X will get your applications up and running in record time while keeping the interface consistent and your users productive. ♦

CODE CACHE

```
{
/* Double clicking an icon == do something
with it. If it's not a directory, we'll
view it. For now that's all we'll handle,
but the full-fledged version of this
program would handle other actions such as
executing programs, starting a command
processor to execute command files, and
so forth. */

case CN_ENTER:
    pnre =
        (NOTIFYRECORDENTER *)PVOIDFROMMP(mp2);
    pcr = (CNRREC *)pnre->pRecord;

    if (!(pcr->ulAttr & FILE_DIRECTORY))
    {
        /* Open the file then destroy
        the container */

        FileOpen(hwnd, pGlobalData,
            pcr->szFileName);
        WinDestroyWindow(pGlobalData->
            hContainer);

        /* Disable the VIEW menu item */

        WinSendMsg(pGlobalData->hMenu,
            MM_SETITEMATTR,
            MPFROM2SHORT(ID_VIEW, TRUE),
            MPFROM2SHORT(MIA_DISABLED,
                MIA_DISABLED));

        pGlobalData->hContainer = NULLHANDLE;
    }
    break;

default:
    break;
}
break;

default:
    break;
}
break;

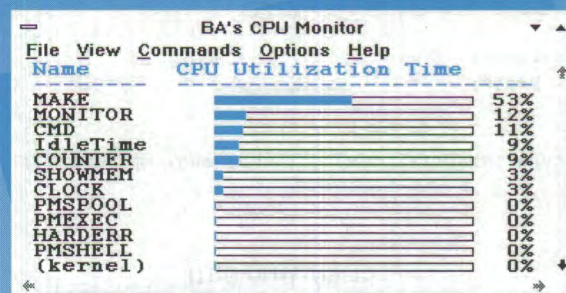
case WM_COMMAND:
    pGlobalData =
        (GLOBALDATA *)WinQueryWindowPtr(hwnd, 0);
    switch ((id = SHORT1FROMMP(mpl)))
    {
        /* Handle FILE menu choices */

        case ID_FILE_OPEN:
            FileOpen(hwnd, pGlobalData, NULL);
            break;

        case ID_FILE_CLOSE:
            FileClose(hwnd, pGlobalData);
            break;

        case ID_FILE_EXIT:
            WinPostMsg(hwnd, WM_CLOSE, 0L, 0L);
            break;
    }
}
```

CPU Monitor^{Plus}™



Boosts OS/2 To The Max

CPU Monitor Plus gives a real-time boost to your OS/2 1.2, 1.3 or 2.x system. Display real-time CPU performance and RAM utilization data for all processes and threads; detect and stop invisible, runaway and background programs. Suspend threads and dynamically change priorities for any of your PM applications. OS/2 2.x users can display real-time RAM utilization data including allocated and in-use totals, ratios and more.

For a limited time, CPU Monitor Plus is only \$129.95. Start getting maximum performance out of OS/2. Order CPU Monitor Plus today!

BonAmi Software Corporation

only
\$129.95

60 Thoreau Street, Suite 219
Concord, MA 01742 USA
508-371-1997

Circle #2

CODE CACHE

```

/* Handle VIEW menu choices */

case ID_VIEW_TREE:
case ID_VIEW_DETAILS:
case ID_VIEW_ICON:
case ID_VIEW_NAME:
case ID_VIEW_TEXT:
    SetView(pGlobalData->hContainer,
            pGlobalData, id);
    break;
}
return (MRFROMSHORT(0));

default:
    break;
}

return (WinDefWindowProc(hwnd, msg, mpl, mp2));
}

/*

CLIENTWNDINIT()

*/
static MRESULT ClientWndInit(HWND hwnd,
                             GLOBALDATA *pGlobalData)
{
    FONTMETRICS    fm;

    /* Save the pointer to the global data block. */
    WinSetWindowPtr(hwnd, 0, (void *)pGlobalData);

    /* Guarantee the state of the file-open and
    file-close menu items. */

    WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
               MPFROM2SHORT(ID_FILE_OPEN, TRUE),
               MPFROM2SHORT(MIA_DISABLED, FALSE));

    WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
               MPFROM2SHORT(ID_FILE_CLOSE, TRUE),
               MPFROM2SHORT(MIA_DISABLED, MIA_DISABLED));

    /* Get the character height for screen painting
    calculations. */

    GpiQueryFontMetrics(WinGetPS(hwnd), sizeof(fm), &fm);
    pGlobalData->sCharHeight =
        (short)fm.lMaxBaselineExt;

    /* Initialize the screen buffer control variables.
    */

    pGlobalData->sTopLine = 0;
    pGlobalData->sLineCount = 0;
    memset(&pGlobalData->rclUpdate, 0,
           sizeof(pGlobalData->rclUpdate));

    /* Return FALSE to indicate that PM should
    continue to create the window. */

```

```

return (MRFROMSHORT(FALSE));
}

```

LISTING 2

```

/*

FILEOPEN()

*/
static void FileOpen(HWND hwnd,
                     GLOBALDATA *pGlobalData,
                     char *pszFileName)
{
    /* If pszFileName is null, the FILE-OPEN menu item
    has been selected. In this case, just create
    the container control and return. Otherwise,
    view the file that the user selected from the
    container. */

    if (!pszFileName)
    {
        pGlobalData->hContainer =
            CreateContainer(hwnd, pGlobalData);
        return;
    }

    strcpy(pGlobalData->szFileName, pszFileName);
    pGlobalData->sCloseFile = FALSE;

    /* Start the file input thread. */

    if (_beginthread(ReadFileThread, 4000,
                    pGlobalData) == -1)
    {
        WinMessageBox(HWND_DESKTOP, hwnd,
                      "Can't start file input thread.",
                      "ERROR!", 0, MB_OK |
                      MB_ICONEXCLAMATION);
        return;
    }

    /* Disable the File-Open menu item. */

    WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
               MPFROM2SHORT(ID_FILE_OPEN, TRUE),
               MPFROM2SHORT(MIA_DISABLED, MIA_DISABLED));

    /* Enable the File-Close menu item. */

    WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
               MPFROM2SHORT(ID_FILE_CLOSE, TRUE),
               MPFROM2SHORT(MIA_DISABLED, FALSE));

    return;
}

/*

FILECLOSE()

```


CODE CACHE

```

*/
static void FileClose(HWND hwnd,
                     GLOBALDATA *pGlobalData)
{
    int    i;

    pGlobalData->sCloseFile = TRUE;

    /* Enable the File-Open menu item. */

    WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
               MPFROM2SHORT(ID_FILE_OPEN, TRUE),
               MPFROM2SHORT(MIA_DISABLED, FALSE));

    /* Disable the File-Close menu item. */

    WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
               MPFROM2SHORT(ID_FILE_CLOSE, TRUE),
               MPFROM2SHORT(MIA_DISABLED, MIA_DISABLED));

    /* Free the text buffers */

    for (i = 0; i < pGlobalData->sLineCount; i++)
        free(pGlobalData->pszText[i]);

    /* Reset screen buffer elements. */

    pGlobalData->sTopLine = 0;
    pGlobalData->sLineCount = 0;
    memset(&pGlobalData->rclUpdate, 0,
           sizeof(pGlobalData->rclUpdate));

    /* Force a repaint of the screen to erase it. */

    WinInvalidateRect(hwnd, NULL, FALSE);

    return;
}

/*
CALCLINEPOSITION()
*/
static void CalcLinePosition(HWND hwnd,
                           GLOBALDATA *pGlobalData,
                           short sLineIndex,
                           RECTL *prcl)
{
    /* Get the client window's dimensions. */

    WinQueryWindowRect(hwnd, prcl);

    /* Calculate the position of the text on the
       client window. */

    prcl->yTop -= (sLineIndex - pGlobalData->sTopLine) *
                 pGlobalData->sCharHeight;
    prcl->yBottom = prcl->yTop -
                  pGlobalData->sCharHeight;

    return;
}

```

Join The 90%

The Micro Channel Developers Association represents over 90% of the market share of Micro Channel-based products such as PS/2s, RS/6000s, NCR Series 3000, Olivetti and others.

Members of the association include companies such as IBM, NCR, Phoenix, Olivetti, AMD, ALR, Memorex Telex, Madge Networks, Dialogic, Motorola, Parallan, Seattle Telecom, Systech Corp., Tseng Labs, Mitsubishi, Cornerstone, Equinox, and many more.

Would You Risk \$30/Month To Get Connected?

As an associate member of the MCDA your company receives many *essential* benefits, such as:

- Technical Support for Micro Channel
- Product Referral
- International Catalog of Micro Channel Products and Services (twice/year)
- Monthly Newsletter (latest news, products, events)
- Technical References
- Technical Seminars
- Bulletin Board (to access the latest drivers, ADF files, and many more services)

YES! I want the power of membership with MCDA!

Call 1 800 GET MCDA

MCDA is a worldwide, non-profit organization dedicated to the promotion of Micro Channel.



Micro Channel Developers Association
2280 North Bechelli Lane, Suite B
Redding, CA 96002
Phone 916.222.2262 FAX 916.222.2528



Circle #120

CODE CACHE

```

/*
    READFILETHREAD()

*/
static void ReadFileThread(void *pv)
{
    GLOBALDATA *pGlobalData;
    FILE *fp;
    char *psz,
          szBuff[256];

    pGlobalData = (GLOBALDATA *)pv;

    /* Open the file. */
    if (!(fp = fopen(pGlobalData->szFileName, "r")))
    {
        /* Couldn't open the file - Notify the client
        window procedure and terminate. */

        WinPostMsg(pGlobalData->hClient, UM_ENDOFFILE,
            MPFROMSHORT(errno), 0);
        _endthread();
    }

    /* Read the file & transmit each line to the
    client window. */

    while (fgets(szBuff, sizeof(szBuff), fp))
    {
        /* Check the termination flag. */

        if (pGlobalData->scloseFile)
            break;

        /* Remove the newline if present. */

        if ((psz = strchr(szBuff, '\n')))
            *psz = '\0';

        /* Allocate a text buffer and post it to the
        client window. */

        psz = malloc(strlen(szBuff)+1);
        strcpy(psz, szBuff);
        WinPostMsg(pGlobalData->hClient,
            UM_LINEOFTEXT, MPFROMP(psz), 0);

        /* With a very fast disk it's possible to
        post messages faster than the PM thread
        can paint the screen. So call DosSleep to
        give up the remainder of our time slice in
        order to give the PM thread time to paint. */

        DosSleep(0);
    }

    /* Close the file & signal end-of-file to the
    client window. */

    fclose(fp);

```

```

WinPostMsg(pGlobalData->hClient, UM_ENDOFFILE,
    MPFROMSHORT(errno), 0);

```

```

    _endthread();
}

```

LISTING 3

```

/*
    CREATECONTAINER()

*/
static HWND CreateContainer(HWND hwnd,
    GLOBALDATA *pGlobalData)
{
    HWND hContainer;
    FIELDINFO *pfi,
              *pfiRoot;
    FIELDINFOINSERT fi;
    CNRINFO cnri;
    SWP swp;
    ULONG ulLength;

    /* Create the container, sizing to the
    client window dimensions */

    WinQueryWindowPos(hwnd, &swp);
    hContainer = WinCreateWindow(hwnd, WC_CONTAINER,
        NULL, CCS_MINIRECORDCORE,
        0, 0, swp.cx, swp.cy,
        hwnd, HWND_TOP,
        ID_CONTAINER, NULL,
        NULL);

    if (!hContainer)
        return (NULLHANDLE);

    /* Allocate a field info struct for defining
    detail columns */

    pfi = WinSendMsg(hContainer, CM_ALLOCDETAILFIELDINFO,
        MPFROMLONG(5), NULL);

    pfiRoot = pfi;

    /* Define the icon column field */

    pfi->pTitleData = "Icon";
    pfi->flTitle = CFA_CENTER | CFA_FITTLEREADONLY;
    pfi->flData = CFA_BITMAPORICON | CFA_CENTER |
        CFA_HORZSEPARATOR | CFA_SEPARATOR |
        CFA_FITTLEREADONLY;
    pfi->offStruct = FIELDOFFSET(CNRREC, mrc.hptrIcon);

    /* Define the file name column field */

    pfi
        = pfi->pNextFieldInfo;
    pfi->pTitleData = "File Name";

```


CODE CACHE

```
pfi->flTitle      = CFA_CENTER | CFA_FITITLEREADONLY;
pfi->flData       = CFA_STRING | CFA_LEFT |
                  CFA_HORZSEPARATOR;
pfi->offStruct    = FIELDOFFSET(CNRREC, mrc.pszIcon);

/* Save the name column info for creating a
   splitbar downstream */

memset(&cnri, 0, sizeof(cnri));
cnri.cb          = sizeof(cnri);
cnri.pFieldInfoLast = pfi;
cnri.xVertSplitbar = 220;

/* Define the file size column */

pfi              = pfi->pNextFieldInfo;
pfi->pTitleData   = "Size";
pfi->flTitle      = CFA_CENTER | CFA_FITITLEREADONLY;
pfi->flData       = CFA_ULONG | CFA_RIGHT |
                  CFA_HORZSEPARATOR | CFA_SEPARATOR;
pfi->offStruct    = FIELDOFFSET(CNRREC, ulSize);

/* Define the file date column */

pfi              = pfi->pNextFieldInfo;
pfi->pTitleData   = "Date";
pfi->flTitle      = CFA_CENTER | CFA_FITITLEREADONLY;
pfi->flData       = CFA_DATE | CFA_LEFT |
                  CFA_HORZSEPARATOR | CFA_SEPARATOR;
pfi->offStruct    = FIELDOFFSET(CNRREC, Date);

/* Define the file time column */

pfi              = pfi->pNextFieldInfo;
pfi->pTitleData   = "Time";
pfi->flTitle      = CFA_CENTER | CFA_FITITLEREADONLY;
pfi->flData       = CFA_TIME | CFA_LEFT |
                  CFA_HORZSEPARATOR;
pfi->offStruct    = FIELDOFFSET(CNRREC, Time);

/* Define the columns */

memset(&fii, 0, sizeof(fii));

fii.cb          = sizeof(fii);
fii.pFieldInfoOrder = (FIELDINFO *)CMA_FIRST;
fii.cFieldInfoInsert = 5;
fii.fInvalidateFieldInfo = TRUE;

WinSendMsg(hContainer, CM_INSERTDETAILFIELDINFO,
            MPFROMP(pfiRoot), MPFROMP(&fii));

/* Create the splitbar */

WinSendMsg(hContainer, CM_SETCNRINFO, MPFROMP(&cnri),
            MPFROMLONG(CMA_PFIELDINFOLAST |
            CMA_XVERTSPLITBAR));

/* Get the current directory */

ulLength = sizeof(pGlobalData->szCurrDir) - 1;
pGlobalData->szCurrDir[0] = '\\';
DosQCurDir(0, &pGlobalData->szCurrDir[1],
            &ulLength);
```

**INDELIBLE
BLUE**

Inc

*Catalog
Available*

Your OS/2 Specialists

▶ **Wide selection of the latest 32-bit applications at discounted prices**

▶ **Shareware & public domain software \$3 - 5⁰⁰ per disk**

▶ **Books, T-shirts, mugs, mousepads, and more**

Special corporate and OS/2 User Group discounts

The *Single* Source for the OS/2 User

FAX (919) 783-8380 VOICE (919) 834-7005

◆ CIS 70670,2352 ◆

Circle #45

The Path To A Good GUI Isn't Always Clear

Navigate the maze with the NEW Gpf 2.1 Professional Developers ToolKit

Promises are cheap, GUI development tools aren't. Gpf 2.1 demo software is FREE. Try Gpf before you buy any tool and you'll agree that Gpf 2.1 DELIVERS.

With this powerful point and click visual programming environment you can create a CUA '91 Graphical User Interface for OS/2 Presentation Manager® or MS DOS/Windows® in as little as 10% of the time required to hand code the same design.

What You See Is What You Get programming reduces weeks of coding to hours. Quickly prototype and test your interface, then let Gpf write the code. Gpf generates error free, structured Object Oriented C or C++ source, complete with embedded SQL for OS/2 DataBase. Custom Help and Logic are added to controls as they are drawn to create full Client/Server or Stand-alone applications!

Gpf is hosted on OS/2 2.x and generates native code for OS/2 2.x, OS/2 1.3.x and MS Windows 3.0 or 3.1. Of course this means maximum performance with no run time module and no royalties!

* GUI Programming Facility

Seeing Gpf is believing!

- Design 32 or 16 bit GUIs for IBM OS/2® or Microsoft Windows®
- Be creative, WYSIWYG design environment
- Full CUA '91 Control set, 32 or 16 bit
- Full application and/or DLL generation
- Reusable Objects
- Automatic documentation
- Minimal time to application delivery



Gpf

Try us, FREE Demo Software Available

Order Gpf Pro ToolKit today for just \$1440⁰⁰

Separately: Gpf 2.1 for \$1295⁰⁰ & GpfTools for \$195⁰⁰

Or, try: Gpf 2.0 Single Platform, now available for just \$495⁰⁰

SYSTEMS, INC. Call Gpf Systems Inc. at: (800) 831-0017

Phone (203) 873-3300 • fax (203) 873-3302 30 Falls Road, Moodus, CT 06469

Circle #12

CODE CACHE

```

/* Start the container fill thread */

if (_beginthread(FillContainerThread, 4000,
    pGlobalData) == -1)
{
    WinMessageBox(HWND_DESKTOP, hwnd,
        "Can't start container fill thread.",
        "ERROR!", 0, MB_OK |
        MB_ICONEXCLAMATION);
    WinDestroyWindow(hContainer);
    hContainer = NULLHANDLE;
}

return (hContainer);
}

/*
    FILLCONTAINERTHREAD()
*/
static void FillContainerThread(void *pv)
{
    GLOBALDATA    *pGlobalData;
    HAB           hab;
    HMq           hmq;
    ULONG         ulFileCount;

    pGlobalData = (GLOBALDATA *)pv;

    /* Create a PM message queue so we can use
        WinSendMsg() within this thread. */

    ulFileCount = 0;

    if ((hab = WinInitialize(0)))
    {
        if ((hmq = WinCreateMsgQueue(hab, 0)))
        {
            /* Fill the container */

            ulFileCount =
                FillContainer(pGlobalData->hContainer, NULL,
                    pGlobalData->szCurrDir);

            /* Clean up */

            WinDestroyMsgQueue(hmq);
        }
        WinTerminate(hab);
    }

    /* Tell the client window the container is filled */

    WinPostMsg(pGlobalData->hClient, UM_CNRFILLDONE,
        MPFROMLONG(ulFileCount), 0);

    _endthread();
}

/*
    FILLCONTAINER()

```

```

*/
static ULONG FillContainer(HWND hwnd, CNRREC *pcrRoot,
    char *pszDir)
{
    ULONG         i,
                ulMaxFiles,
                ulFindBuffSize,
                ulFileCount;

    long          rc;
    HDIR          hdir;
    char          *pszFileSpec,
                *pszFullName;
    CNRREC        *pcr,
                *pcrFirst;
    FILEFINDBUF3  *pffb,
                *pffbFirst;
    RECORDINSERT  ri;
    HPOINTER      hptr;

    ulFileCount = 0;

    /* Allocate a find buffer and two file spec arrays.
        Since this function is recursive, allocate them
        dynamically to minimize stack requirements. */

    ulFindBuffSize = sizeof(*pffb) * FINDBUFF_ENTRIES;
    if (!(pffbFirst = malloc(ulFindBuffSize)))
        return (0);

    if (!(pszFileSpec = malloc(CCHMAXPATH * 2)))
    {
        free(pffbFirst);
        return (0);
    }
    pszFullName = pszFileSpec + CCHMAXPATH;

    /* Form the search mask */

    strcpy(pszFileSpec, pszDir);
    strcat(pszFileSpec, "\\*.");

    /* Start the search */

    hdir = HDIR_CREATE;
    ulMaxFiles = FINDBUFF_ENTRIES;

    rc = DosFindFirst(pszFileSpec, &hdir, FILE_NORMAL |
        FILE_DIRECTORY, pffbFirst,
        ulFindBuffSize, &ulMaxFiles,
        FIL_STANDARD);

    /* Insert files into the container */

    while (!rc)
    {
        /* Allocate an array of container records */

        pcrFirst = WinSendMsg(hwnd, CM_ALLOCORECORD,
            MPFROMLONG(CNRREC_SIZE),
            MPFROMLONG(ulMaxFiles));

        if (!pcrFirst)
            break;
    }

```


CODE CACHE

```

/* Build the container record array */
for (i=0, pcr=pcrFirst, pffb=pffbFirst;
    i < ulMaxFiles; i++)
{
    /* Form the fully-qualified file name */

    strcpy(pszFullName, pszDir);
    strcat(pszFullName, "\\");
    strcat(pszFullName, pffb->achName);

    /* Load the icon... use the error icon if
       not found */

    if (!(hpctr = WinLoadFileIcon(pszFullName,
        FALSE)))
        hpctr = WinQuerySysPointer(HWND_DESKTOP,
            SPTR_ICONERROR,
            FALSE);

    /* Initialize the record struct */

    strcpy(pcr->szFileName, pszFullName);
    pcr->Date.day      = pffb->fdateLastWrite.day;
    pcr->Date.month    = pffb->fdateLastWrite.month;
    pcr->Date.year     = pffb->fdateLastWrite.year;
    pcr->Time.seconds  = pffb->ftimeLastWrite.twosecs;
    pcr->Time.minutes  = pffb->ftimeLastWrite.minutes;
    pcr->Time.hours    = pffb->ftimeLastWrite.hours;
    pcr->ulSize        = pffb->cbFile;
    pcr->ulAttr         = pffb->attrFile;

    /* Point the icon field at the file name portion
       of the full path name */

    pcr->mrc.pszIcon    = strrchr(pcr->szFileName,
        '\\') + 1;
    pcr->mrc.hpctrIcon  = hpctr;

    /* Bump pointers to the next entries */

    ((char *)pffb) += pffb->oNextEntryOffset;
    pcr = (CNRREC *)pcr->mrc.precNextRecord;
}

/* Do the insert */

memset(&ri, 0, sizeof(ri));
ri.cb                = sizeof(ri);
ri.pRecordOrder      = (PRECORDCORE)CMA_END;
ri.pRecordParent     = (PRECORDCORE)pcrRoot;
ri.zOrder            = (USHORT)CMA_TOP;
ri.cRecordsInsert    = ulMaxFiles;
ri.fInvalidateRecord = TRUE;

if (WinSendMsg(hwnd, CM_INSERTTREC,
    MPFROMP(pcrFirst), MPFROMP(&ri)))
    ulFileCount += ulMaxFiles;

/* Now go back and traverse any subdirectories */

for (i=0, pcr=pcrFirst, pffb=pffbFirst;
    i < ulMaxFiles; i++)
{

```

TE/2

Oberon Terminal Emulator/2

High Quality ** Low Cost
Telecommunication for OS/2

- | | |
|---|---|
| ✓ 32-bit subsystem for OS/2 2.0! | ✓ Written specifically for OS/2! |
| ✓ Smooth, efficient background operation! | ✓ Built-in script language and/or use REXX scripting! |
| ✓ X, Y, Zmodem, CIS _™ B-Plus file transfers! | ✓ Free support via Oberon BBS (507-388-1154). |
| ✓ ANSI, VT100, 3101 terminal emulations! | |

Oberon Software

1405 E Main St.
Mankato, MN 56001
Phone 507-388-7001
Fax 507-388-7568



Send \$1.00
for a demo
diskette!

Orders only, phone 1-800-242-4775

Circle #34

486/33 = 486/33 Right?

The clock rate of your microprocessor isn't the only thing that affects how fast your machine can run OS/2. The bus type, cache, video card, and disk drive are factors in overall performance. The question is, how do you get a realistic idea of how fast your machine is running 32 bit OS/2?

We'd like to make a suggestion. BenchTech for OS/2 is a suite of more than 25 benchmarks written specifically for OS/2. If you are in the market for OS/2 capable computers, or you just want to optimize the computer you have, BenchTech for OS/2 is the tool you need.

BenchTech is a 32 bit PM application, that features, in addition to the system, disk, CPU, video, and application benchmark tests, a logging facility, a macro facility, online help, and CUA 91 controls.

BENCHTECH

for OS/2

For more information, or to order your copy, call:

1-800-598-1718, or

(in the US) The Corner Store **1-800-I-BUY-OS2**

(in the UK) OS/2 Int'l User Group

44 28 564 1175

(in Germany) EDV Beratungun

49 61 837 2918

**SYNETIK
SYSTEMS**

Circle #76

CODE CACHE

```

/* Ignore . and .. (we can't just look for a
dot in the first position since HPFS allows
a dot as the 1st character of a file name) */

if ((pffb->attrFile & FILE_DIRECTORY) &&
    strcmp(pffb->achName, ".") &&
    strcmp(pffb->achName, ".."))
{
    strcpy(pszFullName, pszDir);
    strcat(pszFullName, "\\");
    strcat(pszFullName, pffb->achName);

    ulFileCount += FillContainer(hwnd, pcr,
                                pszFullName);
}

/* Bump pointers to next entries */

((char *)pffb) += pffb->oNextEntryOffset;
pcr = (CNRREC *)pcr->mrc->preccNextRecord;
}

/* Get the next batch of files */

ulMaxFiles = FINDBUFF_ENTRIES;
rc = DosFindNext(hdir, pffbFirst, ulFindBuffSize,
                 &ulMaxFiles);
}

/* Clean up */

DosFindClose(hdir);
free(pffbFirst);
free(pszFileSpec);

return (ulFileCount);
}

/*
SETVIEW()

*/
static void SetView(HWND hwnd, GLOBALDATA
*pGlobalData,
                USHORT usView)
{
    CNRINFO      cnri;

    memset(&cnri, 0, sizeof(cnri));

    /* Set common attributes */

    cnri.cb = sizeof(cnri);
    cnri.flWindowAttr = CA_CONTAINERTITLE |
                        CA_TITLESEPARATOR;
    cnri.pszCnrTitle = pGlobalData->szCurrDir;

    switch (usView)
    {
        case ID_VIEW_TREE:
            cnri.flWindowAttr |= CV_TREE | CV_ICON |
                                CA_TREELINE;

```

```

            break;

        case ID_VIEW_ICON:
            cnri.flWindowAttr |= CV_ICON | CV_FLOW;
            break;

        case ID_VIEW_NAME:
            cnri.flWindowAttr |= CV_NAME | CV_FLOW;
            break;

        case ID_VIEW_DETAILS:
            cnri.flWindowAttr |= CV_DETAIL |
                                CA_DETAILSVIEWTITLES;
            break;

        case ID_VIEW_TEXT:
            cnri.flWindowAttr |= CV_TEXT | CV_FLOW;
            break;
    }

    /* Set the view */

    if (WinSendMsg(hwnd, CM_SETCNRINFO, MPFROMP(&cnri),
                    MPFROMLONG(CMA_FLWINDOWATTR |
                                CMA_CNRTITLE)))
    {
        /* Arrange icons when in any icon view */

        if (cnri.flWindowAttr & CV_ICON)
            WinSendMsg(hwnd, CM_ARRANGE, NULL, NULL);

        /* Remove the old menu check (if any) and set
        the new one */

        if (pGlobalData->usView)
            WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
                        MPFROM2SHORT(pGlobalData->usView,
                                    TRUE), MPFROM2SHORT(MIA_CHECKED,
                                    FALSE));

        WinSendMsg(pGlobalData->hMenu, MM_SETITEMATTR,
                    MPFROM2SHORT(usView, TRUE),
                    MPFROM2SHORT(MIA_CHECKED, MIA_CHECKED));

        pGlobalData->usView = usView;
    }

    return;
}

```


CODE CACHE

LISTING 4

DOS2PM.H

```
#define CLASSNAME      "MyClientClass"

#define ID_FRAME        10

#define ID_FILE          100
#define ID_FILE_OPEN    101
#define ID_FILE_CLOSE    102
#define ID_FILE_EXIT     103

#define ID_VIEW          200
#define ID_VIEW_TREE     202
#define ID_VIEW_DETAILS  203
#define ID_VIEW_ICON     204
#define ID_VIEW_NAME     205
#define ID_VIEW_TEXT     206

#define ID_CONTAINER     300

#define MAXLINES         100

#define UM_LINEOFTEXT    (WM_USER+1)
#define UM_ENDOFFILE     (WM_USER+2)
#define UM_CNRFILLDONE   (WM_USER+3)
```

LISTING 5

DOS2PM.RC

```
/*
This file supplies the menu definition for the example
program. In addition to menus, a resource file can
define dialog boxes, icons, text strings, and other
objects used by a PM program.
*/
```

```
*/
```

```
#include <os2.h>
#include "dos2pm.h"
```

```
MENU ID_FRAME
```

```
{
    SUBMENU "--File", ID_FILE, MIS_TEXT
    {
        MENUITEM "--Open...", ID_FILE_OPEN, MIS_TEXT
        MENUITEM "--Close", ID_FILE_CLOSE, MIS_TEXT
        MENUITEM SEPARATOR
        MENUITEM "E-xit", ID_FILE_EXIT, MIS_TEXT
    }
    SUBMENU "--View", ID_VIEW, MIS_TEXT, MIA_DISABLED
    {
        MENUITEM "--Tree", ID_VIEW_TREE, MIS_TEXT
        MENUITEM "--Details", ID_VIEW_DETAILS, MIS_TEXT
    }
}
```

```
MENUITEM "--Icon", ID_VIEW_ICON, MIS_TEXT
MENUITEM "--Name", ID_VIEW_NAME, MIS_TEXT
MENUITEM "Te-xt", ID_VIEW_TEXT, MIS_TEXT
}
```

LISTING 6

```
# Make file to build the example program using
# Borland C++ for OS/2
```

```
COMPILE=bcc -c -sm -I$(INCLUDE) -v -Od
LINK=tlink /Toe /aa /L$(LIB) /v
```

```
HEADERS=dos2pm.h
OBJECTS=dos2pm.obj
```

```
dos2pm.exe: $(OBJECTS) dos2pm.res dos2pm.def
$(LINK) c02 $(OBJECTS),dos2pm.exe,nul,
c2mt os2,dos2pm.def
rc dos2pm.res dos2pm.exe
```

```
dos2pm.res: dos2pm.rc
rc -r dos2pm
```

```
dos2pm.obj: dos2pm.c $(HEADERS)
$(COMPILE) dos2pm.c
```

LISTING 7

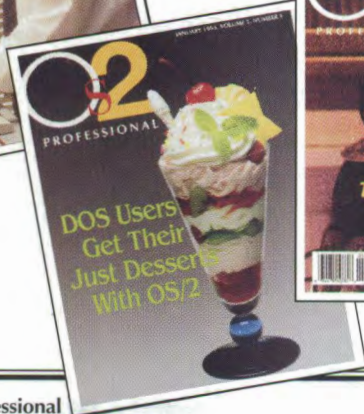
DOS2PM.DEF

```
NAME          DOS2PM          WINDOWAPI
DESCRIPTION    'Sample Multi-Threaded Container Program'
STACKSIZE     10240
```


CIRCLE IT!

For additional information about an advertised product or service, circle the number. When you circle a number, you not only gain access to valuable information, you demonstrate to the advertisers that their support for *OS/2 Professional* gains them an important visibility in the OS/2 market. To subscribe, check the subscription box, and fill out the qualifying information required to fulfill all subscription requests.

ADVERTISER	PAGE	NUMBER	ADVERTISER	PAGE	NUMBER
All Peripherals	56	78	Information Builders.....	14	47
American Computer Technologies.....	96	51	Invictus.....	69	85
BocaSoft.....	47/49	82	Mark Minasi & Company	59	21
BonAmi Software.....	71	2	MHR.....	17	92
CSet++.....	65	114	Microway	69	96
Clear & Simple	36	116	Micro Channel Developers Assn.	73	120
CorelDRAW	113	5	MSR Development.....	4	33
Describe.....	97	7	Oberon Software	77	34
Fall Comdex.....	98	134	One Up Window Washer	114	67
Footprint Software	46	62	OS/2 Professional Interchange	107-110	106
Globalink	43	104	OS/2 Week.....	0/1	132
Golden Compass	39	6	Parallel Storage Solutions.....	47	113
Gpf Systems	75	12	PCX	17	123
Graphical Software Interface.....	67	112	Pinnacle	92	88
HockWare	63	84	Proportional Software.....	12	22
IBM IV League Catalog.....	10	15	Robar	49	128
IBM IV League Catalog.....	84	64	RimStar Technology	96	77
IBM Personal Software Products	21		SAS System	44	
IBM Personal Software Products	23		SAMS Publishing.....	92	125
IBM Personal Software Products	25		ScheduPerformance.....	58	126
IBM Personal Software Products	27		Sofnet.....	2	23
IBM Personal Software Products	29		Soft & GUI.....	16	35
IBM Personal Software Products	31		Softbridge	88	36
IBM Personal Software Products	33		Softouch Systems	57	98
IBM Personal Software Products	35		Sterling Software	93	89
IBM Personal Software Products	37		Synetik Systems	77	76
IBM Personal Software Products	8		Tritus	6	65
IBM Personal Software Products	82		Van Nostrand Reinhold.....	90	39
IBM Skill Dynamics.....	54	70	Vinzant	36	111
IBM Ultimedia Tools	94	80	Watcom.....	60	100
Indelible Blue	75	45			



Have you missed something?

You can order back issues for \$7 each. Fill out this coupon, or call our automated subscription line **(301) 770-4-OS/2 (4672)**.

Please send me: ☐ November 1992 ☐ May 1993
☐ January 1993 ☐ July 1993
☐ March 1993 ☐ August 1993

Total enclosed _____

Send my back issues to:

Name _____
Address _____
City _____ State _____ Zip _____

Mail to: OS/2 Professional/Subscription Dept.
172 Rollins Ave., Rockville, MD 20852

INPUT

continued from page 53

tinue having a life of her own. Maybe, just maybe, she enjoys her job.

Meg DesCamp
Beaverton, Oregon

Being supportive

I was overwhelmed by the frankness and perceptive commentary of Edwin Black's Publisher's Memo in the May issue. As an individual user, albeit briefly, of OS/2 2.0, I would like to add some comments "from the trenches" regarding OS/2 2.0.

This operating system detected a fault in my hard drive controller that corrected a serious system problem. It also gave me the impression that OS/2 was being aimed directly at business users only. While the free help line worked superbly, the help system, "Inside 2.0," was a hopeless mire of information fragments that in no way provided a coherent picture of what

could be done or needed to be done to use features or resolve problems.

I remain a Windows 3.1 user because of the peripheral support that is available—and works—for so many products that are aimed at the individual computer user.

Do I see a future for OS/2 2.1 on my system? That depends on IBM's attitude toward individual user upgrades, supports and willingness to at least offer tools with which users can implement specific peripheral support.

OS/2 2.1 is the operating system of the future. If IBM offers OS/2 2.1 as an upgrade for \$49.95, I might buy it.

Nils J. Dahl, Jr.
Wethersfield, Connecticut

Write on

I would like to address those intellectuals who have a problem with the one-sidedness of *OS/2 Professional*. Hey, deal with it! Have you read a CMP or

Ziff publication lately? What side are they on? And what's wrong with a little digressing? It's easy with OS/2. It's like being a kid again and playing. Like building a house of cards and getting that euphoric feeling of accomplishment when it's done. (I am still trying to overload my system to see when it's going to crash—printing 200 pages, running an automated script, running a query, compiling a program and writing code all at the same time!)

Can you excuse us for indulging ourselves and expressing the joy of computing? Like all great parties, this one will end too and I'm sure *OS/2 Professional* will resume the traditional publication role of spewing reams of deliciously dry facts that only my gray matter would love. In the meantime, please let the party go on, because honestly where else can we OS/2 aficionados go?

continued on page 111



Subscribe
the *EASY* way.
Call 301-770-4-OS/2 (4672)

Join 200,000 colleagues
who are enjoying the OS/2
Professional lifestyle.

Introducing
The Developer
Connection for OS/2

Development's

They're all here. All the tools, tips and techniques you need to send your OS/2® development rocketing up the charts. Brought to you by the original artists: IBM's own OS/2 development team.



Join The Developer Connection for OS/2,™ and you'll receive the most timely and extensive information available to the OS/2 community. Four times a year, you'll get a CD packed with the latest productivity tools, utilities and sample programs from IBM and others. A powerful browser and easy, graphical user interface let you locate any topic instantly in our comprehensive technical library.

Each CD includes the latest releases of smashes like "The Developer's Toolkit for OS/2," "Multimedia Presentation Manager/2 Toolkit," and "Pen for OS/2 Toolkit." Plus, you also get pre-release versions of many IBM products, operating systems, internal development tools, product demos, bit maps—you name it.

But wait, there's more. You also receive



greatest

The Developer Connection News, our newsletter filled with information about the latest OS/2 developments, new products, a Q&A column and much more. Plus, you get access to the Developer Connection forum on CompuServe,™* where you can talk directly to the experts.

And here's music to your ears: Buy a year's subscription to The Developer Connection for OS/2 before November 30, 1993 and pay only \$149—a savings of \$50 off the regular rate. Call 1 800 6DEVCON today, and start producing some hits of your own.

hits.

Operate at a higher level.™

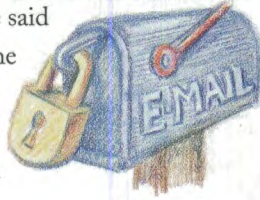


*CompuServe membership is required. IBM and OS/2 are registered trademarks and The Developer Connection for OS/2 and "Operate at a higher level" are trademarks of International Business Machines Corporation. CompuServe is a trademark of CompuServe Incorporated. ©1993 IBM Corp.

US/TOO

Gossip and Chip Talk

TRY FAXING PEARCE. At least one leading CompuServe user has had enough of the joys of e-mail. **Patrick Pearce**, chairman of the Westchester OS/2 Users Group, has closed his long held e-mail box after being dragged into a back-and-forth dispute on CompuServe involving a barely comprehensible disagreement with a developer he barely knew. Pearce said it just wasn't worth the aggravation and the best way to avoid the necessity to respond and keep focused on his work was to cancel his account. You can't answer mail you don't receive.



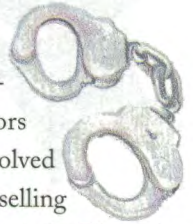
SHORING UP IBM PR. More details on **Joel Shore's** coverage in *Computer Reseller News* of the release of OS/2 2.1. Little known is that a scheduling snafu blocked Shore's original interviews with IBM officials. Persistent Shore was able to secure interviews with Big Bluers. Alas, snafu or no snafu, his opinion nonetheless yielded a column entitled "IBM's Big Blue Blunder," which asserted that the company had a technologically superior product in OS/2 but was handicapped by inadequate marketing.



PRESS EFFORTS BEEFED UP. Speaking of PR, after years of understaffing its press relations department—and watching Microsoft snatch up all the ink—IBM is finally getting smart. The beleaguered media folks at IBM are getting some help. The press office is being expanded. Several new media specialists are being added to the team, plus the clerical support needed to make the place work. It's all under the managing baton of **Allison Johnson**. Overjoyed and overworked OS/2 media specialists will now actually be able to respond to journalists' inquiries in less than two weeks and use their knowledge of the product to help OS/2's image in the media. It looks like new OS/2 marketing general manager, **Bill Rich**, is keeping his promise to add and subtract the personnel needed to make OS/2 a success. A report card on press relations reform later.

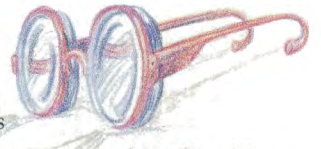
AMERICA'S MOST WANTED. *OS/2 Professional* Editor-in-Chief **Edwin Black** was featured last month on the season's premiere of the crime busting TV series *America's Most Wanted*. Just prior to joining *OS/2 Professional*, Black conducted a two-year

investigation that cracked the largest insurance fraud in U.S. history and the biggest international money-laundering scheme prosecutors have seen in recent memory. The scam involved scores of bogus off-shore insurance entities selling phony malpractice insurance to doctors and hospitals. The racket was seemingly run by numerous individuals and companies around the world. In fact, Black's investigation showed, the insurance empire was operated by members of a single family—the Bramson family—located in Maryland. The FBI made numerous arrests. But two of the Bramson clan fled, family patriarch **Norman Bramson**, and his son, **Martin**. *America's Most Wanted*, however, has a 75 percent capture ratio, and within hours of the broadcast, Norman was turned in by a number of his girlfriends; he was arrested the next day in La Jolla, California. Martin remains at large. Black's latest in the investigation appears as the cover story of the September issue of *Medical Economics*. Soon the family's use of computers will be detailed in *OS/2 Professional*.



VISION AND TELEVISION.

IBM's CEO **Louis Gerstner** is trying to set his sights on Big Blue's recovery, but there seems to be some question about his vision. Reporters and just about everybody else keeps asking when Gerstner will announce his "vision for IBM." However, at last month's press conference to announce the latest plunge in IBM earnings, Gerstner told the audience "the last thing IBM needs right now is a vision." He went on to stress the company's new mandates to be profitable, service oriented, and to "connect to everything." CNN, however, reported it backwards, citing those new mandates as "Gerstner's new vision for IBM." To see or not to see, that is the question.



OS/2 PROFESSIONAL INTERCHANGE.

The OS/2 Professional Interchange, scheduled for Palm Springs. October 17-20, is attracting so many registrants to its up-to-the-minute program that the Interchange partners, CT Meeting Planners and *OS/2 Professional*, have already scheduled April and October conferences in 1994 and 1995. ♦



INDEPENDENT VENDOR LEAGUE™

IBM®

- OS/2® -

OPERATE AT A HIGHER LEVEL™

This Special Package . . .



. . . Will Put You In Overdrive

From the best selling "Client/Server Programming" book to the fine tuning utilities on the critically acclaimed "Performance 2.X," there's no better combination to maximize your system.

Add the LAN video and every corporation or department has all the tools they'll need to hit peak efficiency.

Advanced

Performance 2.X book/disk	\$19.95
LAN VHS video/disk	59.95
Client/Server Programming book	39.95
Regularly	\$119.85

**Save
Over
\$20⁰⁰**

— Special Offer Only \$99.00 —

**For Easy Ordering Call 1-800-342-6672 and Ask For Item No. 1062
(9 a.m. to 9 p.m. EST Monday - Friday)**



**To Receive Your Free Catalog of Additional OS/2 Products
Call Toll-Free 1-800-342-6672**

I.D. # P4

©1993. All Rights Reserved. IBM and OS/2 are registered trademarks, Independent Vendor League and Operate At A Higher Level are trademarks of International Business Machines Corporation. All other names and logos are (registered) trademarks of their respective companies.



MARKETLINE

Product News for the OS/2 User

COMPILED BY MARLENE SEMPLE

SCOOPS

Central Point keeps OS/2 healthy

Central Point Software is now beta testing Central Point Anti-Virus for OS/2 (CPAV OS/2). *OS/2 Professional* has learned. At press time, the company said it was so enthusiastic about the product, that it was preparing to release news of the beta phase, a departure for this traditionally tight-lipped company.

A true 32-bit application, CPAV OS/2 will provide full support for OS/2 features such as HPFS and the Presentation Manager user interface.

CPAV OS/2 uses the same virus detection and cleaning

engines as the DOS version, which received the highest overall rating for virus protection programs in a recent National Software Testing Laboratory evaluation. Not only will CPAV OS/2 recognize the signatures of more than 2,000 known viruses, but will detect unknown viruses through a system called SmartChecks.

According to Tori Case, product manager for anti-virus products, "The virus analyzer looks for viral-type code using the same techniques that our programmers use when they

look at [infected] code." This is advantageous for corporate users who can quickly become overwhelmed by security concerns. (Central Point reports that more than 100 new viruses appear every month). SmartChecks significantly reduces the frequency of product upgrades, an expensive and time consuming process for large installations, while maintaining protection against new virus strains in the interim periods.

CPAV OS/2 integrates with other Central Point anti-virus products through Cen-

tralTalk technology, which provides automatic, cross-platform communications between versions running on Windows, DOS, Macintosh and Novell NetWare.

Pricing has not yet been set, but CPAV OS/2 will cost less than \$200. Site licenses and volume purchase agreements will also be available. CPAV should be out of beta and generally available by Q4 1993.

Central Point Software, Inc., 15220 N.W. Greenbriar Parkway, #200, Beaverton, OR 97006-5798 (503) 690-8090, fax (503) 690-2660.

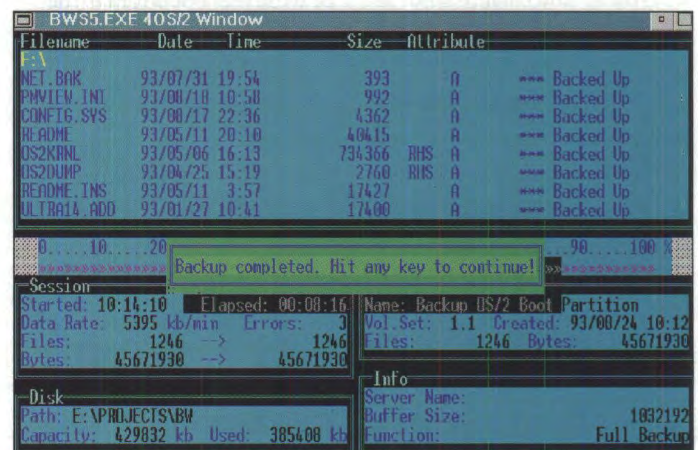
OS/2 BackupWiz premieres

There's a new comprehensive Backup/Restore program that takes full advantages of OS/2. OS/2 BackupWiz, a character-mode program, is capable of fully restoring an OS/2 boot partition, thus saving the time normally required to manually reinstall the operating system. The software supports OS/2's extended attributes, long file names, and HPFS.

The manufacturer, San Diego based PCX, reports that OS/2 BackupWiz supports a long list of SCSI tape sub-

systems, from 150-megabyte QIC to multi-gigabyte 4 and 8 mm tape to automated tape-loading devices with 100 gigabyte-plus capacities. OS/2 BackupWiz will sell for \$129 in September, but get it fast because on October 1, the price goes up to \$189.

PCX, 3525 Del Mar Heights Rd., Suite 313, San Diego, CA 92130 (619) 259-9797, fax (619) 481-6474.



New Products

Movin' that data around

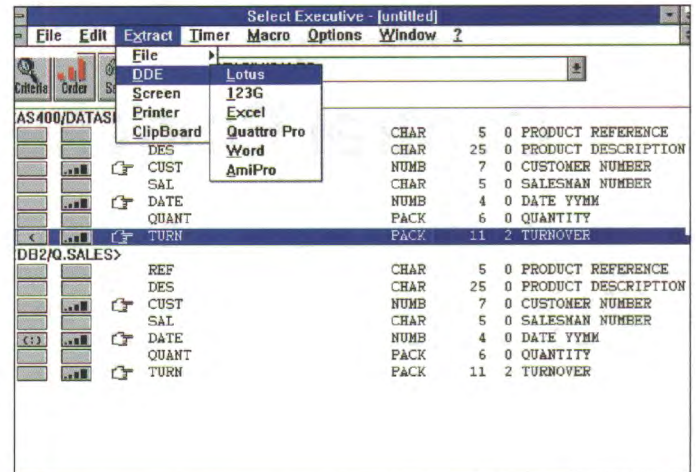
Allen Systems has announced Select Executive, a transfer data package that moves data from either host relational databases to PC-based applications, or from one PC database to another.

With Select Executive running under OS/2 Presentation Manager, Windows or DOS, users can extract information from DB2, Oracle, Sybase, SQL Server, Progress and other databases. Then, using DDE links, Select Executive incorporates the data directly

into applications such as Excel, Word for Windows, Lotus 1-2-3 and Ami Pro. Host database connectivity is provided under MVS, VM, OS/400, UNIX and LAN relational databases.

Select Executive 3.1 could also be used to upload revised data from a personal computer to an AS/400, transform and sort data using virtual fields based on individual criteria, and extract data using the insert mode in Quattro Pro or Lotus 1-2-3 for OS/2 or Windows and more.

In the case of spreadsheets and other DDE-compatible applications, Select Executive



will automatically refresh the data as it is changed.

An initial site copy costs \$500; subsequent copies cost \$1,000 each. Volume

discounts are available.

Allen Systems Group, 750 11 St. South, Naples, FL 33940 (800) 93-ALLEN, fax (813) 263-3692.

Master your priorities

If you've ever had an urge to tweak the performance of your multitasking sessions, Priority Master may be just the program for you. Priority Master lets you set the background priority of most OS/2 applications, whether full screen or windowed. The priority setting will then appear at the top of each window and in the task list. Online help explains the settings and offers performance tips. The utility comes in two versions: one for general users (\$79) and a more robust version for developers (\$99).

ScheduPerformance, 3470 N. University Dr., Suite 217, Sunrise, FL 33351 (305) 486-8299

Developers pack from Microway

Microway now offers three compilers for OS/2: NDP Fortran, NDP C/C++ and NDP Pascal. Each language is available with IBM's Toolkit or with the Toolkit plus the IBM WorkFrame.

Priced at \$595, the NDP OS/2 Developers Pack includes one OS/2 compiler, the IBM OS/2 Toolkit and the IBM WorkFrame. Without the WorkFrame, the Developers Pack is available for \$495.

Microway, PO Box 79, Kingston, MA 02364 (508) 746-7341, fax: (508) 746-4678.

Job scheduling

Have you ever wished you could use two or more computers to process a long job? Would you like to schedule tasks to run while PCs sit idle at night? If so, you should look into automated job scheduling.

Now, the first PC-based job scheduling system to take advantage of distributed processing, the Event Control Server, is available for OS/2. The new release, version 3.0, automates processes and schedules tasks either over a LAN or on a stand-alone PC.

A single license costs \$1,495 and a 10 server license goes for \$9,995.

Vinzant, Inc., 600 East Third Street, Hobart, IN

46342 (219) 942-9544, fax (219) 942-1480.

Language for voice

FAR Voice is a new programming language that supports the Dialogic series of voice boards. The language gives developers the tools they need to create interactive voice applications for OS/2. Application modules developed using FAR Voice are also available.

The modules include FAR Voice source code and a license to modify and use the code without additional royalties. Current application modules include a full-featured voice mail and auto-attendant application, remote recording of audiotext speech files, a self-

MARKETLINE

configuring audiotext application and a survey module that supports automatic report generation and fax delivery of reports.

FAR Systems, Inc., 7898 High Ridge Rd., Fort Atkinson, WI 53538 (414) 563-2221, fax (414) 563-1865.

Downsizing in communications

Serengeti Systems is shipping an OS/2 version of its 3780Link BSC RJE emulation package for the Smart-Sync/DCP multi-port communications coprocessor. The terminal emulation package provides multiple BSC RJE communication ports on PCs running OS/2. Two, four, and eight port versions are available.

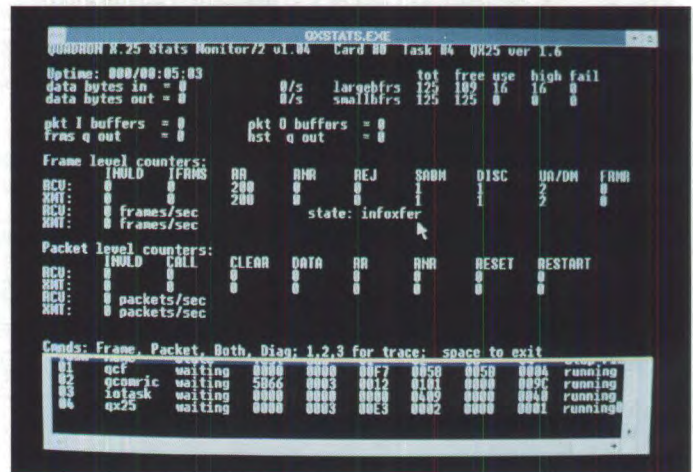
BSC RJE communications are commonly used for data

transfer applications involving medical claims, electronic data interchange (EDI), point-of-sale systems, credit card verification, automated funds transfer, automated teller machines, and bank clearing houses.

Serengeti Systems, 808 West 10 St., Suite 101, Austin, TX 78701 (512) 345-2211 fax, (512) 480-8729.

Communications Software

Quadron Service Corporation of Santa Barbara, California, announced four new releases of its communication software products for OS/2 this summer. Three of the products—qCF, qX25, and qLAPB—are toolkits that work in conjunction with the IBM ARTIC intelligence coprocessor card. By fitting the



product into the expansion slot of a PC, users can create communication protocols for complex systems such as government applications or intensive financial plans. The fourth product, the qCOM, is a "plug 'n' play" tool that allows asynchronous use with OS/2 COM ports while offloading interrupt handling

to an ARTIC card. The software ranges in price from \$150 to \$2,000 depending on which product is being purchased and whether it is bought new, or as an upgrade.

Quadron Service Corporation, 209 East Victoria Street, Santa Barbara, CA 93101 (805) 966-6424, fax (805) 966-7630.

News

Backmaster readies for gold

Late last month, MSR Development shipped the final beta version of its long anticipated Backmaster backup software. The product is expected to ship in September.

OS/2 Professional Interchange exhibitors

Nearly all exhibitor space has sold out at the OS/2 Professional Interchange, to be held in Palm Springs, October 17-20.

Key exhibitors include IBM, WordPerfect, Computer Associates, DeScribe, One Up, and many others. The emphasis is on up-to-the minute 2.1 and LAN technology.

Ami Pro still not ready

Lotus' Ami Pro for OS/2 will not be ready to ship before the end of September. *OS/2 Professional* has learned from sources at Lotus Development. The product was originally expected in June. When it

does ship, Ami Pro will be the third player in the OS/2 word processing sweepstakes, competing with DeScribe and WordPerfect for OS/2.

White paper on multimedia

A new management white paper from Gistics entitled, "Multimedia Developer Challenges and Strategies for Success," offers insights into the burgeoning multimedia industry and recommends action for developers in the field.

The paper, which is based on research involving more than 900 multimedia-related firms, reports that the first wave of true multimedia titles will hit the market in early 1994. Sales of CD-ROM drives, which consumers need to use multimedia programs, are expected to soar next year.

By 1997, the white paper asserts, 90 percent of personal computers sold in the U.S. will feature multimedia capabilities. However, new classes of multimedia devices, such as the television set-top box and

MARKETLINE

personal digital assistant, will extend the reach of multimedia into the family rooms and shirt pockets of America.

"Multimedia Developer Challenges & Strategies for Success," a 43-page report, is available for \$129 from Gistatics, 700 Larkspur Landing Circle, Suite 199, Larkspur, CA 94939 (415) 461-4305, fax (415) 457-5800.

IBM to use Symbiotics for Network DDE

IBM will use the Symbiotics network DDE and Clipboard product in future IBM networking products. Symbiotics

is a vendor offering products for building groupware and workgroup applications. A major offering in the Symbiotics NetWorks! software line is NetWorks! Connect, which runs on OS/2 and Windows. It enables end users to hot-link DDE software applications, extend the clipboard, publish and share data resources across a network.

Preloading update

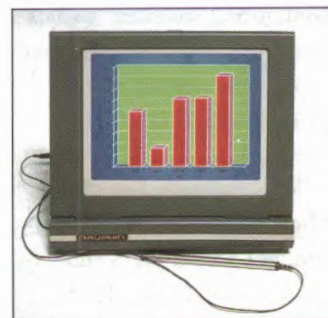
For corporate accounts, AST is preloading OS/2 2.1 on its Premmia and Bravo desktop systems, and its Premium SE uniprocessor and Manhattan SMP multiprocessor servers.

AST's Premmia features a LocalLink video subsystem, a fast graphic subsystem for OS/2 that works well for multimedia, CAD/CAM and scientific and engineering applications.

Xtend Micro Products is offering OS/2 2.1 preloaded in upgrade solutions for older IBM PS/2s. The new offerings include the 486/33 and 486/50 processor upgrades and several hard drive options with OS/2 2.1 preloaded.

Pen computing

Dauphin Technology, a designer of mobile computers, has announced it will support



OS/2 2.1 and pen extensions on its Dauphin 5000 and 5000-C Color Convertible Pentop models. For pen-specific applications, an electronic stylus substitutes for a mouse. ♦

How are you going to test your client/server apps? Check one:

- ☐ Manually
- ☐ Partially
- ☒ The Softbridge Automated Test Facility

It's not a trick question, but testing client/server applications can be a tricky business. Manual methods can't stand up to the complexities of client/server. And most automated testing tools provide only a partial answer. They concentrate on the GUI desktop, leaving the rest of the client/server testing puzzle for you to piece together.

Only the Softbridge Automated Test Facility (ATF) is designed to cover all aspects of client/server testing — GUI, distributed systems, legacy applications. If you're doing client/server development, maybe it's time you checked out ATF. To find out how ATF can help with your client/server testing needs, call 1-800-955-9190.

☒ **The Softbridge Automated Test Facility**

Circle #36

 Softbridge, Inc.
125 CambridgePark Dr.
Cambridge, MA 02140
617-576-2257 (Phone)
617-864-7747 (FAX)

continued from page 49

menu selections. For example, if you work primarily with research papers, you could define footnote (or endnote) insertion as a button.

This adaptability extends throughout WordPerfect. For example, file operations allow two options: standard directory lists or quick lists. With quick lists, you can define a descriptive name (such as "September Editorial" or "Sales Reports") and an associated path. Then, instead of navigating through a directory tree to find a file, you simply click on the descriptive name and WordPerfect jumps right to the directory—a wonderful time saver for frequently accessed directories and documents. Savvy OS/2 desktop users may already be managing their files using drag and drop with open desktop folders, but the quick list is a useful alternative.

We experienced some problems installing WordPerfect for OS/2 on a network, primarily because our installation philosophy differs from the default offered by WordPerfect. We prefer

WordPerfect 5.2

WordPerfect Corp.
1555 N. Technology Way
Orem, Utah 84507
(800) 451-5151

LIST PRICE:
WordPerfect 5.2
\$495

to keep binary files (such as .EXE and .DLL files) in a set of read-only directories, data files (such as dictionaries and macro libraries) in limited access directories and user-specific configuration files in a directory with full access.

While WordPerfect permits such structures, a few of the files

are kept in the same directory (or a related subdirectory) by default. We adjusted the directory names to our desired configuration, but when we looked at the completed installation, the structure did not quite match our specifications. As a result, some files (such as supplementary dictionary files) were installed in read-only directories when we had specified limited access directories.

As with the Windows version, WordPerfect for OS/2 provides a full complement of utilities including a spelling checker, a thesaurus and a grammar checker (Grammatik 5). But despite the maturity of the WordPerfect product line, we found some surprising limitations. Search and replace have no options to find only whole words or enable/disable case sensitivity. While you can quickly and easily get a word count, there is no command for character count. Although you can retrieve one of the last four files you edited—a nifty feature—WordPerfect will not return to

the last location within the document (if you were in the middle of something, you must remember where it was). These features may not be critical to all users, but would add a certain fit and finish to the product.

WordPerfect Corporation wisely portrays WordPerfect 5.2 for OS/2 as an interim product for users who need OS/2 features and compatibility with existing versions of WordPerfect on DOS and Windows. We would add that WordPerfect for OS/2 is not yet for everyone. WordPerfect would clearly benefit from a native 32-bit version. That version was originally expected in early 1994. Our sources suggest the date will almost certainly be no sooner than Spring COMDEX, but is just as certainly tied to the success of 5.2. This is an unfortunate strategy that could hurt both WordPerfect and the OS/2 community. We expect that many OS/2 aficionados with the computing horsepower and patience to live with the initial quirks of a first-release product will find a place for WordPerfect for OS/2 on their desktops. But until its performance is enhanced, WordPerfect will not be usable by people rely on word processing as a primary application.

As writers and editors, we live and die by our word processors. Editors here easily use their word processors eight to ten hours per day seven days per week. For us, word processing is mission critical. Indeed, as one of the key PC applications (along with spreadsheets and databases), we realize that word processing is important to everyone. In most cases, the wisest assessments are those made after day-in day-out combat usage of the product. That's why our evaluation of WordPerfect for OS/2—and all OS/2 word processors—will be on-going, as we explore the intricacies of the product, and as the new versions are released.

If you are an early adopter in the OS/2 community, and/or if you are unwilling to wait another six to eight months for the impressive feature-rich Workplace Shell benefits of WordPerfect for OS/2, then this is a product you will want to consider. That is why we characterize 5.2 as a good first step on the way to a premiere product. ♦

MAKE YOUR OS/2 POWER MOVE NOW!

for applications that are

• more dynamic

• easier to use

• faster to develop



NEW AND BESTSELLING RESOURCES *from*



VAN NOSTRAND REINHOLD

New!

THE OS/2® 2.1 CORPORATE PROGRAMMER'S HANDBOOK

By Nora Scholin, Martin Sullivan, and Robin Scragg

Simplify migration from DOS and Windows to OS/2 2.0 and find valuable solutions based on modular subdesigns, from function key assignments to pull-down menus.

\$39.95, 352 pages, cloth, ISBN 0-442-01598-4

New!

USING WORKPLACE OS/2®

Power User's Guide to IBM's New Operating System / 2 Version 2.1

By Lori T. Brown and Jeff Howard

Get the "inside" help of the Workplace Shell's lead designers to convert easily and quickly from Windows and Mac environments to OS/2 • set up, maintain, and customize your own Workplace environment • power up with OS/2's Multimedia Presentation Manager/2 under Workplace.

\$24.95, 400 pages, paper with disk, ISBN 0-442-01590-9

WRITING OS/2® 2.0 DEVICE DRIVERS IN C

By Steven J. Mastrianni

The first guide to programming 32-bit OS/2 device drivers includes C source code examples, with optional disk. Reduces the difficulty and cost of writing device drivers for OS/2.

\$36.95, 410 pages, paper with optional disk, ISBN 0-442-01141-5

New edition of a best seller!

CLIENT/SERVER PROGRAMMING WITH OS/2® 2.0

Second Edition

By Robert Orfali and Daniel Harkey

Readers raved about the first edition of this definitive Client/Server-OS/2 resource. In-depth tutorials and sample code make this the ideal guide to client/server in the 32-bit environment. Covers all new 2.0 functions.

\$39.95, 1,026 pages, paper, 0-442-01219-5

OS/2® is a registered trademark of IBM Corporation.

New!

OS/2® 2.X NOTEBOOK

The Best of OS/2® Developer Magazine

Edited by Dick Conklin

Foreword by Philippe Kahn, Borland International, Inc.

Here is a wealth of practical tips and techniques, coding examples, and product reviews—all designed to help you harness the power of OS/2. An OS/2 resource worth its weight in gold!

\$34.95, 1,164 pages, paper, 200 illustrations, ISBN 0-442-01522-4

New!

THE SHELL COLLECTION

OS/2® 2.X Utilities

By Steve Levenson

This disk and text provide a range of OS/2 2.X software that may not be available in local computer stores or from mail order companies. "Try before you buy" utilities such as • Golden Compass • OPTICACH • SEESYS • SETSWAP • Open shutter • Window Washer • 40S2 • LIGHT • DDUMP

\$29.95 paper, 128 pages, ISBN 0-442-01585-2

EASY ORDERING! CALL TOLL-FREE:

1-800-544-0550 (and get a full listing of VNR titles).

OR FAX 1-606-525-7778

NEW! Coming in September

Visit the **VNR COMPUSERVE BOOKSTORE**
for a more extensive listing of VNR titles.

Watch for details!



VAN NOSTRAND REINHOLD

Publishing for Professionals Since 1848.

M1502

9/93

OS/2 2.1 UNLEASHED

Everything you'll ever want to know about version 2.1 can be yours
in this weighty tome—if you can handle it.

by David Moskowitz & David Kerr, et al. Sams Publishing, \$34.95

REVIEWED BY ALAN JAY WEINER

A dozen OS/2 experts, including several who are architects of OS/2 itself, wrote *OS/2 2.1 Unleashed*. They provide considerable technical information, including some undocumented material and information about the inner workings of OS/2. If you're using OS/2 you will find this knowledge useful, whether you're an individual user or a system administrator—provided you're prepared to deal with a book that weighs nearly five pounds and contains 1,134 pages.

In attempting to cover almost every topic related to OS/2 2.1, *Unleashed* is a bit uneven. Some topics are well covered, others less so. Some are fairly technical discussions, others are useful to a novice reader. Overall, though, the authors and editors have done a good job.

Ample coverage is given to configuring OS/2 to work at its best. Much of *OS/2 2.1 Unleashed* guides you through installing and configuring your system. The book discusses CONFIG.SYS settings in logical groupings; settings related to a particular topic are covered at the same time. I found this arrangement easy to use and understand. For example, looking to optimize disk performance, I found four settings that control hard disk operation. Similar statement groupings cover the settings for video, mouse and serial ports, DOS settings, and so forth. Should you prefer a different appearance than the Workplace Shell, the book offers instructions detailing how to transform the desktop to look like OS/2 1.3 or Windows 3.1.

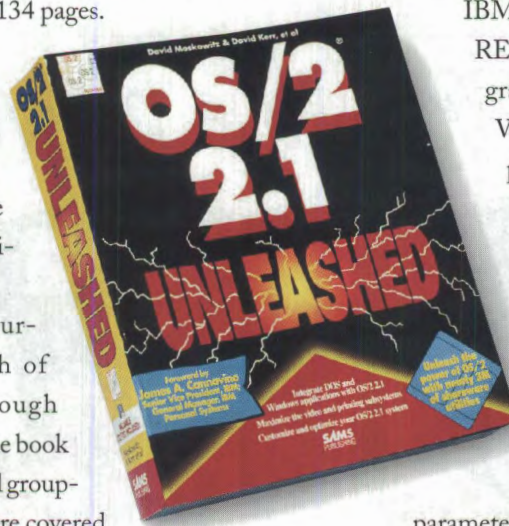
Since the Workplace Shell is both powerful and confusing to many users, *OS/2 2.1 Unleashed* is valuable in explaining its inner

workings. In addition to showing how to use the Workplace Shell, David Kerr explains the concepts behind it - why it works, and how to capitalize on its power. He also shows how to configure it to your preferences.

The book covers the REXX language in detail. More than simply a batch language, REXX is a powerful structured programming language that is available on several of IBM's operating systems. A chapter introduces REXX programming, and various REXX programs are sprinkled throughout the book. While surprisingly simple, these programs provide further detail on OS/2's inner workings. For example, one displays the WPS object classes, another creates folders and data objects. Yet another REXX program demonstrates attaching an icon to a file's extended attributes.

OS/2 2.1 Unleashed charts the way through the various video drivers, base handlers, and configuration parameters. International users will find the description of fonts especially useful. One section lists which fonts comply with the ISO standards that govern the displays and fonts used in Europe.

A few sections are lacking, however. The cursory look at writing OS/2 programs using IBM's Workframe/2 and C Set/2 tools will do little to enhance the average user's use of OS/2. While it's well written, this section would serve better as an introduction in a book entirely about programming. The multimedia section, while also somewhat weak, is more useful. Although much of it simply promotes IBM's multimedia offerings, it also contains



New OS/2 32 Bit PM Tools

DESKTOP CONTROL & SECURITY

Hocus Focus

Now Only \$59.00

Window Manager for your Desktop that provides quick consistent access to windows via a Mini Icon Control window. When you open a window it gets captured. Just move your mouse pointer over the mini icon and the text for the object will appear. Once you have made your choice it is a single click away. No more clutter and forget about the Task List.

Desktop Observatory

Now Only \$99.00

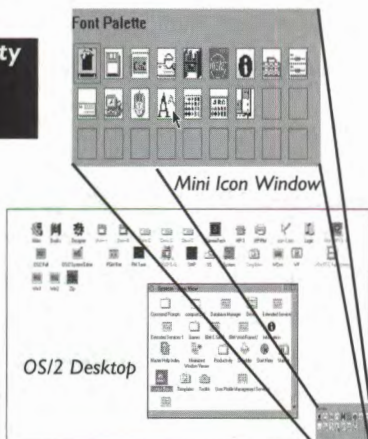
Combines the elegance of the Hocus Focus Mini Icon window with the ability to control a group of objects or a single program that has several windows. Password protect any object with its powerful window by window security system.

Password Security
Consistence
Convenience
Flexibility

Call us today
at
1-800-525-1650

Pinnacle Tecnology
P.O. Box 128
Kirklin Indiana 46050

Master Card or Visa
accepted. Indiana
residents add 5.5% Tax
Circle #88



BOOKSTAX

valuable information on configuring CD-ROM drives.

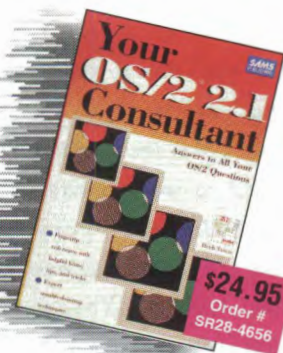
OS/2 2.1 *Unleashed* includes the obligatory companion disk. The disk contains mostly shareware programs that require you to register—at additional cost—to obtain full-featured versions. Several may only be used for a short time without registering. The only advantage to getting them as a companion disk is to save the cost of downloading from a BBS.

Overall, OS/2 2.1 *Unleashed* is a massive source of information, delivering most of what it takes on and promises. Despite minor criticisms of a few sparsely covered subjects, and the problem of inconsistent levels of technical detail, it's a successful compilation. ♦

Alan Weiner is president of Technology 21 in Waltham, Massachusetts. He's been working with computers since the PDP-8, with OS/2 since the 2.0 beta, and with his baby daughter since May 1st, when she was just a little heavier than OS/2 2.1 Unleashed.

the
BOOKSTORE
BOOKS
AUDIO
VIDEO

UNLEASH the power of OS/2®



with these three
great books
from
SAMS
Publishing

Act Now!
Buy all 3 for only
\$79.95*
*LIMITED TIME ONLY

Order #
SK2T7041

Save almost
\$20.00

The Skill Dynamics BookStore offers more than 200 titles on books, videos and audio tapes.

To order any of these titles or to receive a FREE catalog

Hours:
8 AM - 8 PM, M-F (ET)

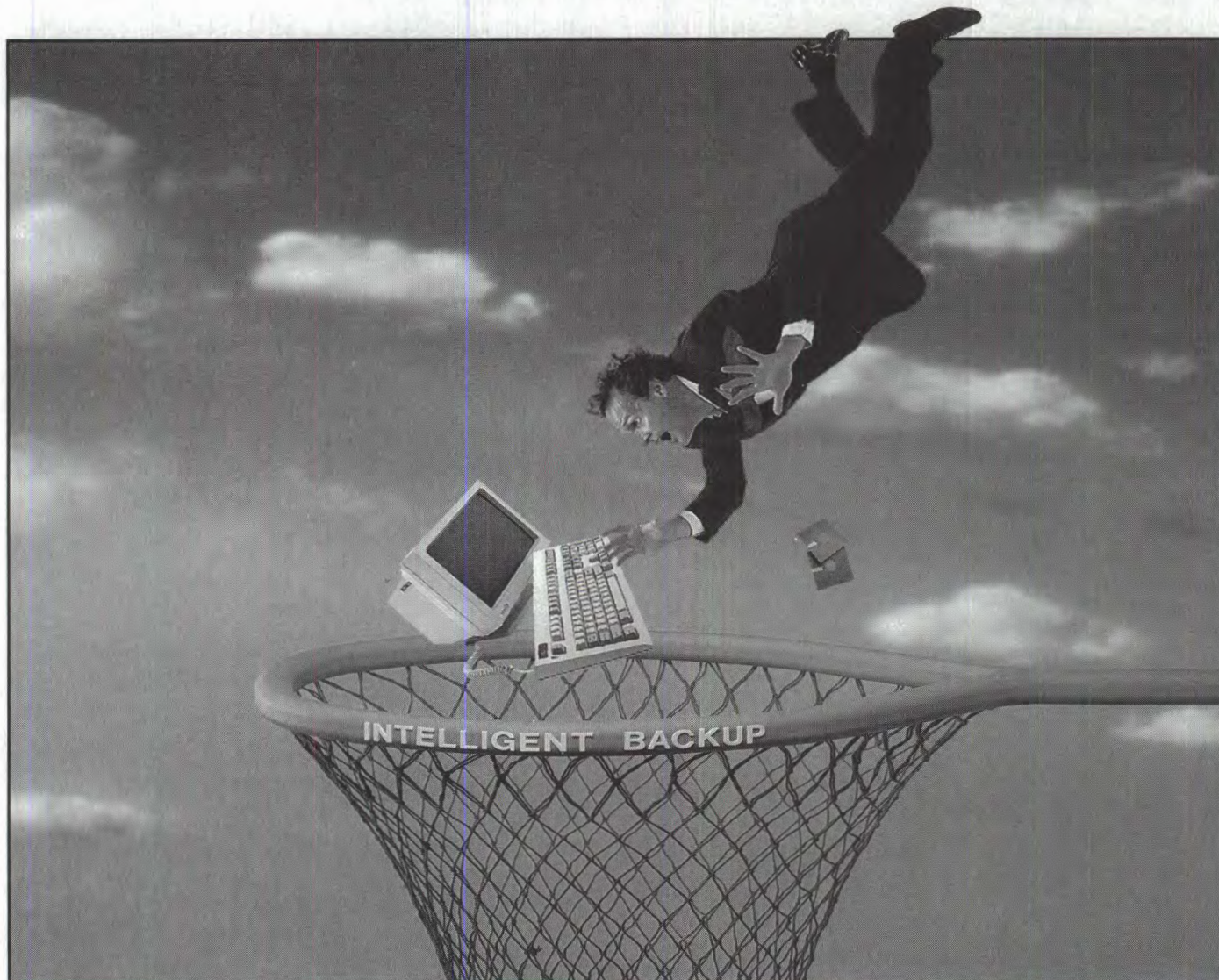
CALL 1-800-568-6294
Ask for Operator #2

Circle #125



Skill Dynamics™
An IBM Company

Prices subject to change without notice and do not include taxes or shipping and handling charges. © Copyright IBM Corporation, 1993. OS/2 is a registered trademark of the IBM Corporation. Skill Dynamics is a trademark of the IBM Corporation.



Introducing The Most Effective Safety Net For Your OS/2 Data.

Lose your OS/2 data and you're in for a big fall. Which is why we've built the ultimate safety net for OS/2 — Sterling DMS/IB.

DMS/IB is the smart way to back up OS/2 — smart enough to remind users when it's time to backup. Or even to force backups at selected intervals. It's powerful and easy to use. And advanced options can reduce your backups to minutes per day. If your system does fail, you can restore OS/2 in minutes, without a time-consuming reinstallation.

Once backed-up, your data is protected by data verification and anti-corruption features. And you have the security of knowing that we've been protecting critical data in demanding environments for over 20 years.

So don't fall for the "safety" of products that can't support the weight of their claims.

See DMS/IB for OS/2 in action.

Call 1(800)854-4011 for a free Demo Disk.



**STERLING
SOFTWARE**

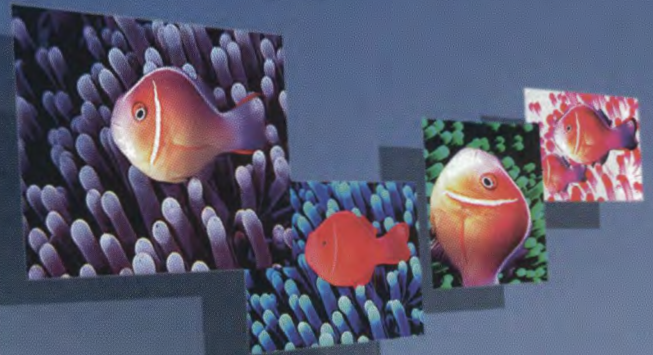
Sterling Software, Systems Software Marketing Division, 11050 White Rock Road, #100, Rancho Cordova, CA 95670. (916) 635-5535
Sterling Software and its products are trademarks or registered trademarks of Sterling Software Corporation.

3 Easy Pieces

make multimedia so easy, you'll wonder why you waited...

Ultimedia Builder/2

Cut, copy, paste, drag and drop images, text, audio, and video into Builder/2's film-strip-like work area to quickly *create* your multimedia business presentations.



Ultimedia Perfect Image/2

Retouch, resize, rotate, cut, copy, paste,

drag and drop images to easily

enhance

pictures to add to your multimedia

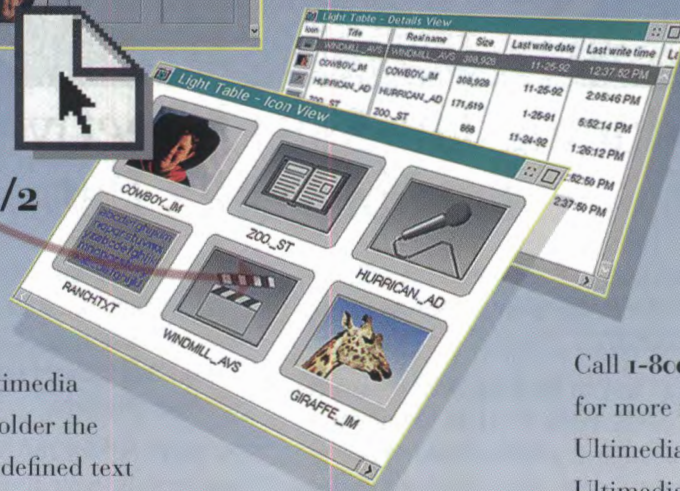
business presentations.

Ultimedia Workplace/2

Visually

manage

your images, text, audio and video multimedia objects with thumbnails arranged in a folder the way that makes sense to you. Add user-defined text definitions. And link it all to supported databases such as: dBase IV, Oracle, OS/2 Database Manager, and DB2/2. Multimedia tutorials, created with Ultimedia Builder/2, make learning to use the toolset a snap.



Call 1-800-UTS-7771 Ext. 590 for more information...or to order Ultimedia Builder/2, along with Ultimedia Perfect Image/2, at a *special introductory price of \$99* Ultimedia Workplace/2 is also available at the same introductory price. Offer good until October 15, 1993.



Personal
Software
Products



Minimum requirements: IBM PS/2, 25-MHz 386 or greater processor; CD-ROM drive or 1.44 MB 3.5" disk drive, fixed disk. XGA or SVGA display adapter with appropriate color display. Keyboard and mouse; 12 MB internal memory for Builder/2, 8 MB internal memory for Perfect Image/2 and Workplace/2, and OS/2 2.1 with MMPM/2. IBM, Ultimedia, PS/2, OS/2, XGA, and MMPM/2 are registered trademarks of International Business Machines Corporation. Ultimedia Tools Series, Perfect Image, Database Manager, DATABASE 2, and DB2/2 are trademarks of International Business Machines Corporation. dBase IV is a trademark of Borland International. Oracle is a trademark of Oracle Corporation.



THE LAW

Legislation and Regulation for the Information Age

BY NEIL MUNRO

• **Hatch acts on Microsoft.** The Justice Department's antitrust suit against Microsoft may actually see the inside of a courtroom—and if that opening gavel does sound, much of the credit will go to two U.S. senators: Orrin Hatch, R-Utah, and Sen. Howard Metzenbaum, D-Ohio.

Hatch and Metzenbaum waded into the legal mire by pressing officials at the Federal Trade Commission to hand the case over to the Justice Department. The FTC has deadlocked 2-2 on the case following a recusal by the commission's fifth member.

Utah, not so coincidentally, is the home of two important software firms concerned about Microsoft's business conduct. Orem, Utah-based WordPerfect Corporation is locked in a battle with Microsoft and Lotus for control of the word processing and office productivity suite markets. Provo, Utah-based Novell, Inc. is among those leading the call for government action against Microsoft.

As chairman of the Senate's subcommittee on antitrust, monopolies, and business rights, Metzenbaum wrote in a July 13 letter to Janet Steiger, the chair of the FTC, "I would strongly urge you to refer the case to the Department of Justice's Antitrust Division for an independent review...it would be regrettable if the commission closed out the [Microsoft] file on this investigation due to a deadlock." Hatch's office also initiated telephone contacts with Justice officials.

In response to the efforts of Hatch and Metzenbaum, Ann Bingamann, assistant attorney general in charge of the Justice Department's antitrust division, said the department will aggressively investigate the issue, "and bring suit where warranted."

Microsoft and its chairman, Bill Gates, stand accused of a gamut of unfair practices, including modifying

Microsoft software to ensure incompatibility with software developed by rivals such as Novell. "The Justice Department's review of the case is appropriate," said Ray Noorda, chairman and chief executive officer of Novell. "Microsoft's dominance [of software] has taken full advantage of the PC market."

• **Congress beefs up defense.**

Congress is redirecting more Defense Department money into programs intended to foster military simulation technology, computer software research, and conversion of military technology to civilian uses.

Among the measures included in the July 28 Senate Armed Services Committee report were the allocation of \$376 million for computer and communication technology research, paying for programs such as an effort by the Arlington, Virginia-based Advanced Research Projects Agency to develop better techniques and technology for reusing and linking already-built software components.

The agency was also given an additional \$122 million for high-performance computers and \$107 million to help develop high-definition television in partnerships with industry leaders.

Another \$300 million went to foster improved manufacturing technology, while classified programs received hundreds of millions of dollars to develop computer and software technology used to crack enemy codes, detect hidden bunkers and analyze enemy secret weapons.

• **Simulation stimulation.** The Senate has signaled wholehearted support for Pentagon efforts—led by the Army—to improve simulation technology.

Currently, the Army uses simulations to train individual soldiers and combat units, measure the combat effectiveness

of weapon designs, and practice war plans. New programs will allow 4,000-soldier Army brigades to train together on networked computers running sophisticated battle simulation software.

In addition, Project Plowshares would support Army officials' use of simulation technology to help local and state officials cope with natural disasters such as floods.

The fruits of this Pentagon-sponsored research are working their way toward consumers: Bethesda, Maryland-based Martin Marietta, for example, recently concluded a deal with Japanese video game maker Sega Enterprises Ltd, while Tampa-based Reflectone Inc. signed to supply motion theater simulation to the Sea World theme park in San Diego.

• **Skipjack endorsed.** The National Security Agency's Skipjack message scrambling software has won the endorsement of a five-person panel established by the National Institute for Standards and Technology.

According to the panel, there is no significant risk that the software, intended to protect phone and computer messages from decryption, can be broken by powerful computers for the next 30 to 40 years. Nor is there a significant risk that Skipjack software can be breached by a clever short cut, the panel concluded. The Skipjack software is intended to replace the widely used Digital Encryption Standard (DES) scrambling software.

"The government's new encryption algorithm is first-rate," according to Dorothy Denning, a software expert at Washington, D.C.-based Georgetown University. Other panel members included Ernest Brickell of Sandia National Laboratories, Stephen Kent of BBN Communications Corp., David Maher of AT&T, and Walter Tuohmen of the Amperif Corp.

RimStar Programmer's Editor

It's time you had the best GUI editor to develop your applications!

- ✓ OS/2 2.0 32bit PM Interface (MDI)
- ✓ Unlimited number of files/windows
- ✓ Fully programmable
- ✓ Complete C macro language
- ✓ Source browser for C
- ✓ Compile & jump to errors
- ✓ Unlimited Undo & Redo
- ✓ Multi-threaded for no waits
- ✓ Timed auto-save
- ✓ Workframe/2 aware
- ✓ Template editing
- ✓ Fully Brief compatible
- ✓ plus many, many more features

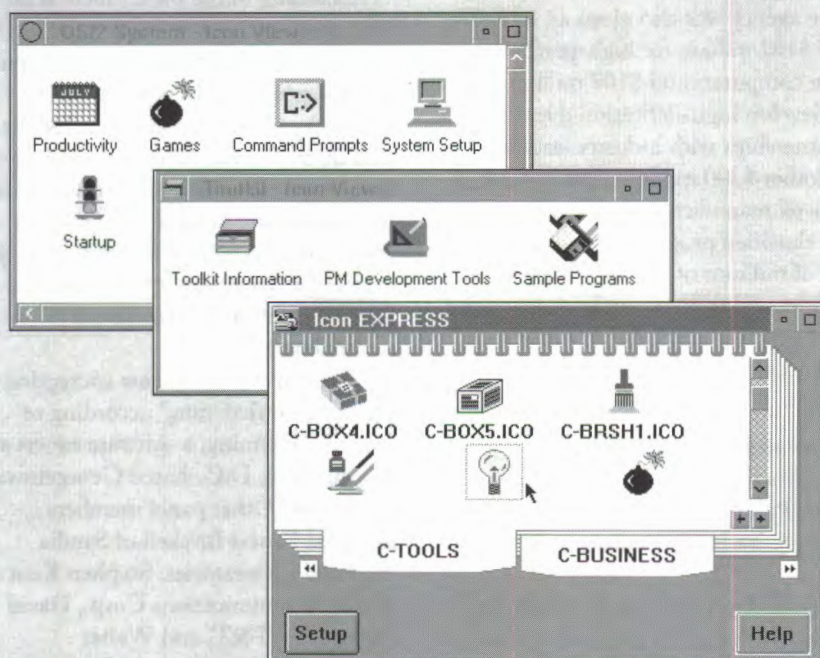
Buy your copy today \$295.

Demo version available.

RimStar Technology, Inc (603) 778-2500
91 Halls Mill Road, Newfields, NH 03856

Circle #77

Change icons on the desktop in one simple step!



THE LAW

The software's reliability does not depend on the secrecy of the message scrambling algorithms built into the software, which is to be made widely available for installation in phones, computers and modems.

Despite widespread proliferation, industry officials and civil liberties groups say they are concerned that government officials may try to make the use of Skipjack mandatory, and that government officials might abuse government-controlled shortcuts installed in the Skipjack software. The shortcuts were installed to allow the Federal Bureau of Investigations and the Department of Justice to eavesdrop on conversations.

Among the groups that have opposed mandatory use of the Skipjack software is the Washington-based Computer and Business Equipment Manufacturing Association. "We're fighting that... we don't think it is a good idea," said an industry official.

The NIST-sponsored panel's backing for voluntary use of the standard was detailed in the July 30 edition of the Federal Register. ♦

Neil Munro is a computer industry specialist at Defense News.

Icon EXPRESS Utility for use with OS/2 2.0

Fast... Changes icons on the desktop with a click of the mouse. Instead of 12 steps to change an icon, **Icon EXPRESS** reduces the number of steps to 1! Simply choose the icon to be changed, drag it to the new icon and click!

Organize... Manages other icons in your system. To organize your icons, simply create a new page in the **Icon EXPRESS** notebook and bring icons from other applications into these pages. You now have easy access to all of your icons.

Super 1000 Icon Library

Computer Devices	Documents	Folders
Business/Office	Sports Figures	Nature
Letters of the Alphabet	Geometric Designs	Tools

**INTRODUCTORY
PRICE ONLY
\$49.99**

**1-800
ACT-7185**



American Computer Technologies
2301 Maitland Center Parkway, Suite 445
Maitland, Florida 32751

32

REASONS WHY YOU SHOULD BE USING DeSCRIBE WORD PROCESSOR 4.0 SE

1 DESCRIBE IS THE ONLY WORD PROCESSOR MADE ESPECIALLY FOR OS/2.

2 With Background printing, you can print a document and get back to work instantaneously. 3 Character Manager's the easy way to set special character definitions. 4 With the text box tool you can add copy to a picture frame. 5 You can take advantage of DeScribe's interactive definitions dictionary and thesaurus, as well as define and edit the Group dictionary with your unique company or technical language.

6 DeScribe's multitasking and multithreading let you work on multiple documents all at once. 7 BUBBLE HELP ELIMINATES GUESSING AT CONFUSING ICONS AND SYMBOLS.

8 Master Document Manager lets you control the index, the table of contents, and page numbering across multiple files. 9 DeScribe has always been an innovative leader – and always will be. 10 You can create and name styles from previously formatted text. 11 More than 100 import/export text and graphic filters open a world of possibilities. 12 Edit concurrent varying magnifications of the same document. 13 You can reverse, rotate, and even print colored text. 14 DESCRIBE HAS BEEN CHOSEN BY PC COMPUTING AS A FINALIST FOR ITS 1992 MVP AWARD FOR WORD PROCESSING.

Undoes document changes you made since you last saved the file.



15 You'll be in good company with a number of Fortune 100 corporations.

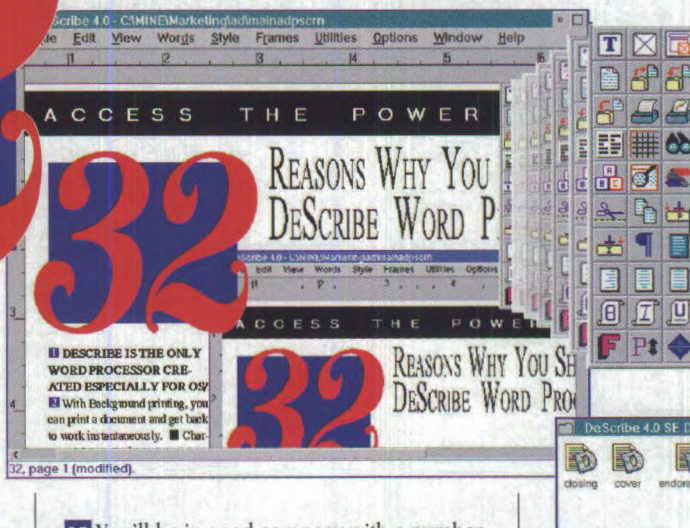
16 Dropped capital letters are a click away. 17 Mail merge is easier than ever.

18 The style palette puts fast dynamic text formatting at your fingertips. 19 DeScribe delivers today what others promise tomorrow.

20 Threaded snapshots automatically back up your work, sparing you from the results of system crashes. 21 Unlimited UNDO restores your work

step by step, all the way back to the last time you saved the document. 22 True hierarchical stylesheets exploit an inheritance structure for unsurpassed document formatting.

23 YOU'LL GET A FREE UPGRADE WITH DESCRIBE WORD PROCESSOR 4.0 SE – THE ONLY SUBSCRIPTION EDITION IN THE INDUSTRY. 24 Both Signature and Two-up printing work together to create booklet formats. 25 Output is easier than ever with drag and drop printing of either individual or simultaneous multiple documents. 26 DeScribe's novice mode simplifies the learning curve.



27 CUSTOMIZE TOOL ICONS JUST THE WAY YOU WANT WHERE YOU WANT.

28 DRAG AND DROP DOCUMENT ICONS MAKE IT FAST AND EASY TO CREATE BOILERPLATES.

29 Only DeScribe Word Processor 4.0 SE gives you unparalleled text control, so you can prepare documents your way – any way you'd like. 30 Creating first drafts is a breeze with convenient draft and outline modes, as well as bulleting and numbering functions.

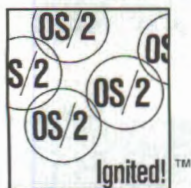
31 Automatically print repeating text (like CONFIDENTIAL) on your document pages.

32 DESCRIBE WORD PROCESSOR 4.0 SE IS NOT THE FIRST 32-BIT WORD PROCESSOR – DESCRIBE 3.0 32 WAS!

DeSCRIBE®

WORD
PROCESSOR

4047 N. Freeway Blvd.
Sacramento, CA 95834
Phone 800 448-1586
FAX 916 923-3447



© Copyright 1992 DeScribe, Inc. All rights reserved. DeScribe® is the registered trademark of DeScribe, Inc. OS/2 IGNITED! logo™ is a trademark of IBM Corp. and is used by DeScribe, Inc. under license. Other brand or product names are registered trademarks of their respective companies.

Technology Happens at COMDEX!



The world's #1 IT event for resellers and corporate decision makers.

- **Over 2,000 exhibitors**—see it all on the industry's biggest show floor!
- **Thousands of products**—discover the latest business solutions in Network Computing, Multimedia, Office Systems, OEM Sources and more!
- **90-session conference**—follow the experts to more productivity!
- **Keynote** from Apple's John Sculley!
- **CEO Perspectives** from Microsoft's Bill Gates, Sun's Scott McNealy and Computer Associates' Charles Wang!

Wherever IT happens, it happens at COMDEX!

REGISTER TODAY BY FAX — CALL 617-449-5554!

Receive your registration form by fax — and reserve your hotel accommodations while they last!

Call 617-449-5554, enter Code 60 and key in your fax number — we'll fax your registration form within 24 hours!

©1993 The Interface Group • 300 First Avenue, Needham, MA 02194-2722 USA



November 15-19, 1993

COMDEX/Fall '93

Las Vegas, Nevada USA



DATA DATES

Seminars, Conventions, Expositions and Conferences for the OS/2 Professional

COMPILED BY ANNE LONGSWORTH

OCTOBER 5-7

NETWORLD '93

Dallas, TX

Networld Dallas, produced by Bruno Blenheim Inc. (BBI), is in its eighth successful year of offering logical, cost effective solutions to industry professionals. This year's opening day is highlighted by a speech from Richard Schell, Vice President of Information Technology at Capital Cities/ABC TV Networks Group, on Re-Engineering an Enterprise. Schell's experience is based on his successful implementation of a client/server system at The Turner Corporation, a Fortune 500 construction company, where he was previously employed. Immediately following the keynote speech will be a "special plenary session" entitled "Workgroup Computing: Insights from Industry Leaders," with a panel of executives from Borland, IBM, Microsoft, Novell, and Lotus, and moderated by Gary Beach, publisher of *Computerworld*. In addition, the Dallas show will be participating in the Foreign Buyer Program for the second year, which allows U.S. and foreign buyers to meet in the International Business Center.

Contact: BBI (800) 829-3976.

OCTOBER 17-20

OS/2 PROFESSIONAL INTERCHANGE

Palm Springs, CA

"The OS/2 Event of the Year" will feature up-to-the-minute and in-depth technical OS/2 developments in the realms of LAN, C++, object oriented programming, pen computing, database, multimedia and more. The emphasis will be on version 2.1. Complimentary OS/2 software will be provided for every registrant from WordPerfect, Computer Associates and IBM, with additional offerings from Lotus, DeScribe and Stac Electronics.

With keynotes from John Soyring and Lois Dimpfel of IBM; John C. Dvorak, *PC Magazine*; and Will Zachmann, *OS/2 Professional*, the conference will provide the latest insights into OS/2.

A unique feature of the event will be a round table from renowned computer writers and hot business press. Edwin Black, publisher of *OS/2 Professional*, will be the moderator for the "Media Ethics" panel, which will delve into OS/2 and the media.

Highlight of the conference will be the First Annual OS/2 Professional Awards. Categories include Man of the Year and OS/2 Product of the Year.

Now that OS/2 2.1 has proved itself worthy of mass-market success, it's time to find out how to profit from OS/2.

Contact: CT Meeting Planners, (800) GET-OS20, (800) 438-6720.

OCTOBER 19-20

PC EXPO

Chicago, IL

Designed after the successful New York show, the eighth annual PC Expo in Chicago is targeted to senior level computer professionals. This year's keynote speaker is Borland International founder and chairman, Phillipe Kahn. Kahn's opening presentation "Client/Server Computing—A Desktop Perspective", will address issues of where client/server computing is headed and the future of the desktop based on object oriented programming. In addition, attendees can view new products from more than 250 exhibitors and visit "special pavilions showcasing networking products, Windows applications, and emerging technologies." Another feature of the show is the Seminar Series offering over 40 sessions with subjects including OS/2 and, for the first time, management issues.

Contact: BBI (800) 829-3976.

OCTOBER 26

NORTH SUBURBAN CHICAGO OS/2 USER'S GROUP

Deerfield, IL

The NSCOUG is an independent organization devoted entirely to anyone interested in OS/2—whether or not you've used the operating system. The group meets on the last Tuesday of every month and features a New User Forum, an Open Forum Question/Answer period, and a keynote speaker. The October 26 meeting, the group's one year anniversary, is devoted to REXX (see TNT this month, page 55). Member Timothy Sipples will lead the discussion on Visual-Rexx, VSREXX, and ViproREXX. The NSCOUG has grown from 5 to almost 100 members in the past year and encourages users of all levels in the Chicago area to come to a meeting.

Contact: James R. Schmidt (708) 317-7405 or Greater Chicago Online BBS (708) 895-4042.

OCTOBER 28-29

BLUEPRINT SERIES

Across the country

This traveling seminar, presented by Wave Technologies Training, Softmart, LAN Magazine, and NETG, is a two day tutorial for LAN

DATA DATES

Administrators, Data Processors, PC Support Group members, consultants or any professional who wants to "start their company on the way to higher productivity." Four separate curricula are covered: The Expanding LAN; Planning for Client/Server; Operating Systems: Decisions '93; and Application Development: The Next Generation. The series is designed to allow for jumping back and forth between the day long topics. In addition, notes for any missed sessions are distributed. This 5 year old series prides itself on being affordable, offering a 4 people for

the price of 3 deal. Locations are in 15 cities across the country starting in Philadelphia. The St. Louis seminars will be held on October 28 and 29.

Contact: Stewart Zeid
(800) 828-2050 Ext. 413.

NOVEMBER 15-19

COMDEX/FALL '93

Las Vegas, NV

Everyone needs an excuse to go to Las Vegas once in a while. The 15th annual COMDEX/Fall '93 is a chance to do some betting while attending the largest trade show in the United

States. The conference offers seminars in five areas: Corporate Computing, New Media, Connectivity, Distribution/Sourcing, and The COMDEX Developers Program. In addition to talks on CEO perspectives from Bill Gates, Scott McNealy, and Charles Wang, Apple Computer Chairman John Sculley, will provide the opening keynote speech. COMDEX/Fall has grown considerably in the past 15 years and, with the endorsement of the U.S. Department of Commerce for involvement in its Foreign Buyer Program, international trade has become a key aspect of the show. Keep an eye out

for extensive coverage of COMDEX in the October issue of *OS/2 Professional*.

.....
*Send meeting & conference notices to Data Dates, OS/2 Professional, c/o International Features, 172 Rollins Ave., Rockville, MD 20852.
Fax: (301) 770-7062
Compuserve: 73740,2661
MCI Mail: 310-3946.
Please be sure to include a contact person, your company name and address.*

Announce your Operating System.

Order your OS/2 Professional t-shirt today.

Adult (XL) \$15 each. Children's (Adult S), \$12 each.
Specify quantity, shipping address and billing information below, and allow 3-4 weeks for delivery.

Please send me _____ adult size t-shirts at \$ _____
_____ child size t-shirts at \$ _____
add shipping \$ 2.00
TOTAL enclosed \$ _____

Name _____

Address _____

City _____ State _____ Zip _____

Enclose check or money order or charge card authorization.

Please bill my ☐ Visa ☐ MasterCard

Card number _____ Expiration Date _____

Signature _____

Send to:

DISC-O-TECH

7831 Woodmont Ave., #381 • Bethesda, MD 20814

ANNOUNCING THE OS/2 PROFESSIONAL AWARDS

Recognizing companies, products, and individuals for excellence and commitment in the OS/2 realm.

The winners of the First Annual OS/2 Professional Awards will be announced at a ceremony at the OS/2 Professional Interchange October 17 in Palm Springs, California. Our judges will evaluate products, individuals, and companies in eight categories nominated by our contributors. So we're asking you, our readers, to vote by fax for the best application award.

OS/2 Pro of the Year Award

To an individual dedicated to the advancement of OS/2.

Best Hardware Award

For excellence in OS/2 compatibility.

Outstanding IBM Executive Achievement Award

To the IBM Executive who has shown exemplary initiative, independence, and achievement in the field of OS/2.

Corporate Commitment Award

To the company that distinguishes itself by a broad, sustained multi-product or multi-service commitment to OS/2.

Team OS/2 Award

To the individual who demonstrates energy, devotion, and idealism to the advancement of OS/2.

Marketing Award

To the company that launches an innovative and effective marketing campaign involving OS/2.

Media Award

To a member of either the computer media or general press, for an article, series, or broadcast, that displays significant insight into the benefits of OS/2.

Best New OS/2 Application Award

For the best new native 32-bit OS/2 application.

Reader's Choice—Best New OS/2 Application

For the best new native 32-bit OS/2 application, as voted by our readers. Fax your nomination to *OS/2 Professional* (301) 770-7062.

One per person only

Nominated Software _____ Version _____

Company _____

Your name, title, address, and phone number:

Judges: Edwin Black, Bradley D. Kliewer, Wayne Rash Jr., Rich Malloy, David Moscovitz, and William F. Zachmann.



WANDERLUST

It's Palm Springs, and its personality is something unique. In a climate that boasts an average 354 days of sunshine and less than 5-1/2 inches of rain each year, there are more than 8,000 swimming pools—nearly one for every five residents. The pools fill multiple roles—as a status symbol, as a convenient locale for exercise and a perfect setting for the most popular pastime in town: catching the sun's rays.

INLAND PARADISE

The setting is almost too perfect to be true. In the middle of the stark, serene beauty of desert terrain stands a natural palm oasis. The two-mile high, snow-peaked San Jacinto mountains rim the horizon. Ancient mineral springs, which early Native Americans say hold magical healing powers, bubble from deep below the surface.

It's Palm Springs, and its personality is something unique. In a climate that boasts an average 354 days of sunshine and less than 5-1/2 inches of rain each year, there are more than 8,000 swimming pools—nearly one for every five residents. The pools fill multiple roles, serving as a status symbol, offering convenience to exercise buffs and providing a logical setting for the most popular pastime in town: catching the sun's rays.

Palm Springs clings stubbornly to vestiges of its small-town ambience. These must vie with strong overtones of sophistication and wealth, touches that come naturally with the presence of 700 millionaires among 45,000 permanent residents. This glossy tone is augmented by the town's long time reputation as a watering hole for movie stars and other celebrities.

It wasn't always so. More than 2,000 years ago, the area sheltered ancestors of the Agua Caliente band of the Cahuilla Native

American tribe. In 1853, a U.S. government survey party mapped Palm Springs and its natural mineral pool, and established the first wagon route through the area.

As late as the beginning of the 20th century, Palm Springs remained little more than a remote sun-baked wide spot in the road. This changed in the early 1930s when silent film stars Ralph Belamy and Charles Farrell bought a bit of land nearby and constructed a tennis court so they could play whenever they wished without having to wait. Sensing that their Hollywood pals would be drawn to the place, they began buying up the desert—at \$30 an acre.

Picking out a choice location with a magnificent view of the mountains, the Palm Springs pioneers built the Racquet Club. That establishment soon began to attract Hollywood, along with European royalty and international business tycoons, who came to share in the endless sunshine and desert serenity. It wasn't long before other resorts and hotels sprang up and the Palm Springs legend was born.

Today, the proliferation of upscale resorts, trendy shops, sophisticated restaurants and other amenities of the rich and famous has transformed Palm Springs into a world-class travel destination.

WANDERLUST



The Palm Springs Aerial Tramway transports riders to a point 8,516 feet high in the Mt. San Jacinto State Park and Wilderness.

The strong ties with Hollywood remain, and continue to provide a touch of glamour. A favorite diversion for more curious visitors continues to be riding a tour bus for a glance at local landmarks such as the honeymoon cottage of Clark Gable and Carol Lombard, Liberace's former home (with piano-shaped mailbox) and hideaway haunts of the likes of Bob Hope, Frank Sinatra, Lucille Ball and Jack Lemmon.

Despite recent growth, Palm Springs remains a walking town. Palm Canyon Drive, the city's "Main Drag," is only a mile from the airport, and is lined with art galleries, antique shops, restaurants and boutiques. It also is bordered by the Desert Fashion Plaza, an elegant international shopping mall containing shops with names like Saks Fifth Avenue and Gucci.

Not far away is the Palm Springs Desert Museum, which houses an outstanding collection of American Western and contemporary California art, and natural science exhibits. The Village Green Heritage Center in the heart of town offers a glimpse into the city's fascinating past. Visitors relive earlier times at Ruddy's General Store and other structures from the 1890s.

The Agua Caliente Cultural Museum Information Center introduces the area's early settlers by means of artifacts, a diorama, and a botanic garden. It also has a gift shop stocked with a selection of unique American Indian merchandise.

Minutes from downtown are three Indian Canyons, the ancestral homes of the Agua Caliente. They are North America's largest palm oases, with large growths of filiferas, the only palms native to this continent. With their lush vegetation, towering cliffs, and plummeting waterfalls, the canyons also serve as home to hundreds of species of wild birds, animals and reptiles.

Opportunities for more challenging adventure are provided by way of the Palm Springs Aerial Tramway, the largest single-span lift in the world. It transports riders from the desert floor to a point 8,516 feet high in the Mt. San Jacinto State Park and Wilderness. There, nature lovers find hiking and equestrian trails, mule rides, and other back-country diversions.

WANDERLUST

Palm Springs sports hundreds of tennis courts, some reserved for guests of resorts, other open to the public.

The Coachella Valley is dotted by more than 100 outstanding golf courses that remain open for play year round. The number of exceptional courses, combined with creative marketing by the local tourism office, has earned Palm Springs the title of Golf Capital of the World. Among the leading architects who hand-iwork challenges champions and duffers alike are Robert Trent Jones, Jr., Pete Dye, and Gary Player. Palm Springs adds to its reputation as a golf mecca by sponsoring more than 100 tournaments a year.

Palm Springs thrives as a playground for the wealthy, but you don't have to be a millionaire to enjoy it. There are plenty of inexpensive activities in which to take part, and the tourism office distributes a list of "20 Free Things to do in Palm Springs."

How far must you travel from Palm Springs to find a place equal in beauty, glamour, and outstanding year-round climate? Is 13 miles too far?

The community of Palm Desert, 13 miles south, is home to Marriott's Desert Springs Resort & Spa. This flagship resort has created a true luxury oasis that will host *OS/2 Professional's* first Interchange. The Interchange is expected to attract some 1,500 leading OS/2 experts. Marriott's Desert Spring is situated on 400 acres of lush grounds, including 23 acres of private lakes and waterways.

The list of recreational amenities alone is enough to attract the attention of vacationers and meeting planners: Two 18-hole championship golf courses make extensive use of waterfalls and the resort's 11 lakes. An innovative 18-hole "golf in miniature" putting course is the first in its kind in the mainland United States.

Horseback riding is a good way to explore the desert canyons.



WANDERLUST

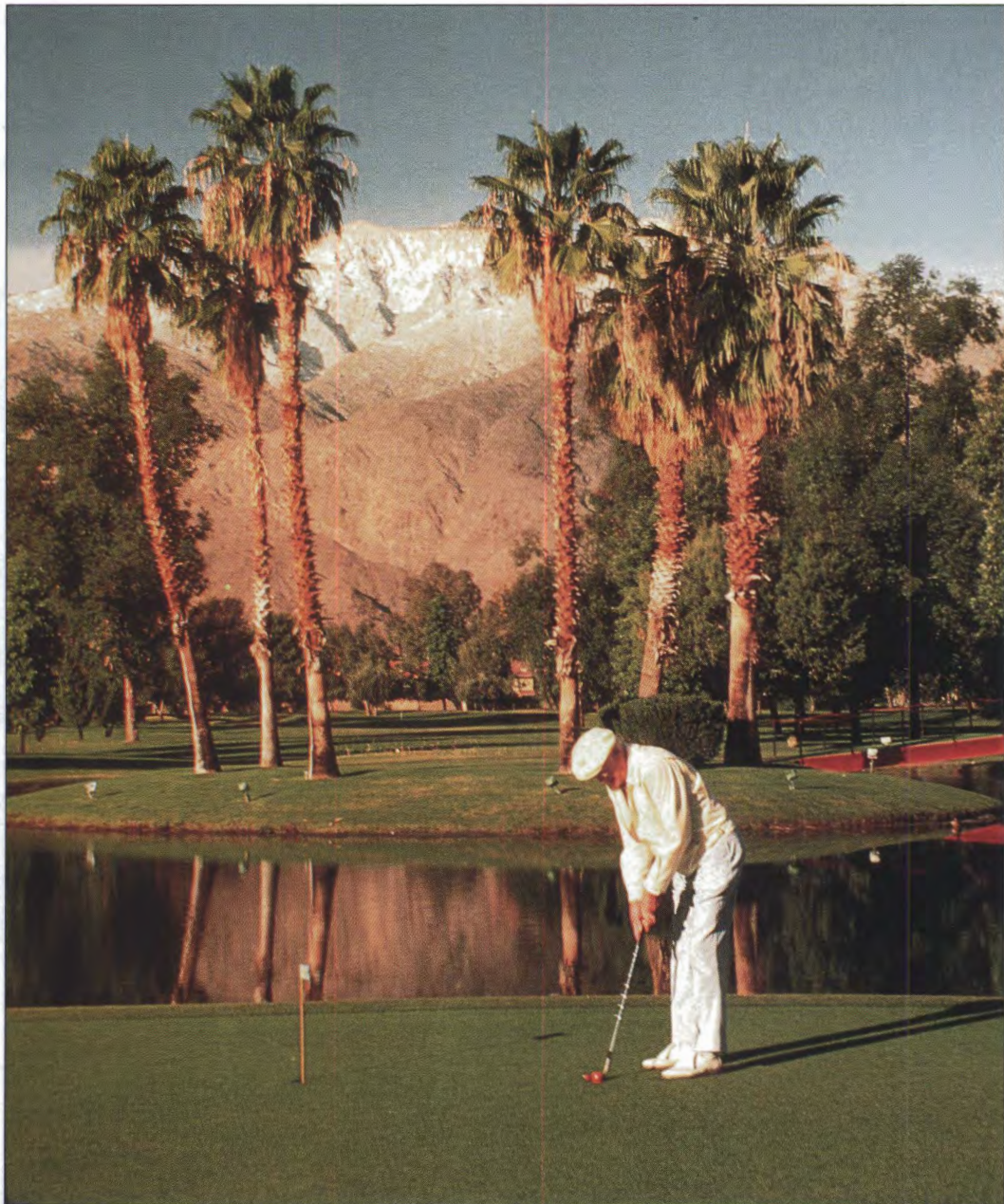
A total of 19 tennis courts includes three clay, two grass and eight lighted courts. The 27,000 square-foot health spa, one of the largest hotel-connected spas in the country, features exercise facilities and programs, spa treatments, spa cuisine, a full fashion boutique and a full medical suite.

Those who seek more sedentary pleasures may opt for the 23,000 square-foot sunbathing beach, rimming a freshwater lake.

Not to be outdone by its nearby, better-known neighbor, Palm Desert is home to El Paseo, a lovely two-mile street that is lined

by tasteful gift shops, attractive boutiques, clothing stores and art galleries. Those who enjoy a stroll along its pavement are not surprised to learn that El Paseo is frequently referred to as the Rodeo Drive of the Desert.

Visitors who combine a stay at Marriott's Desert Springs Resort & Spa with a visit to nearby Palm Springs quickly come to understand why the rich and famous have claimed this lush setting, warmed by an endless desert sun, as their year-round playground. ♦



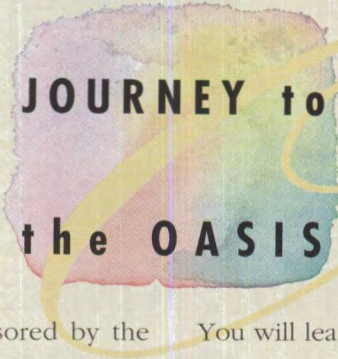


OS/2 PROFESSIONAL INTERCHANGE

October 17-20, 1993
Marriott's Desert Springs Resort & Spa
Palm Desert, California

JOURNEY TO THE OASIS and get on the inside track with the experts who are shaping the future of OS/2 computing. You'll be part of seminars and workshops designed by our leading participants, including IBM, Lotus, Computer Associates, and WordPerfect, in an event sponsored by the editors of *OS/2 Professional* magazine in association with IBM's Independent Vendor League. Keynote speakers include John Soyring, Will Zachmann, John Dvorak, and Edwin Black.

THE ACCENT IS ON 2.1 and everything you need to know to navigate the new version, LAN and C. Customize your agenda from over 90 interactive sessions that range from 32-bit graphics to object-oriented programming, LAN systems, client/server issues to multimedia and database applications.



**JOURNEY to
the OASIS**

WHO SHOULD ATTEND? If you're a corporate developer, independent programmer, software designer, LAN expert, training executive, consultant, MIS or technical coordinator you will profit from the idea and information exchange.

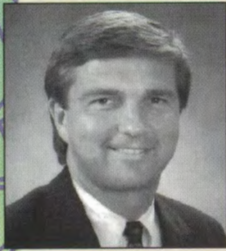
You will learn powerful new skills and explore the phenomenal power of OS/2.

TAKE HOME VALUABLE SOFTWARE. Each attendee will receive a CD-ROM packed with "The Developer Connection for OS/2," including OS/2 2.1 Toolkit, Pen OS/2 Toolkit, and Multimedia Version 1.1 for OS/2 2.1 Base Toolkit, as well as an assortment of LAN software, IBM Communications Manager; plus an interactive CD-ROM with WordPerfect 5.2 for OS/2; a choice of one of Computer Associates' six new applications for OS/2; and more.

Find the OS/2 Oasis in the desert. Space is limited...register now!
For event and session information turn the page.



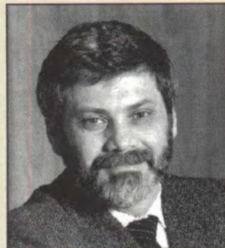
Keynote Speakers



JOHN A. SOYRING. As IBM's director of software development programs, Soyring provides guidance and leadership to hundreds of developers and companies around the world involved with OS/2-related products. Few are as knowledgeable as he is about not only the technical aspects of OS/2, but future planning.

EDWIN BLACK. Mr. Black, editor and publisher of *OS/2 Professional*, has distinguished himself as an investigative reporter, editor and book writer. He is the author of the best-selling *Transfer Agreement* (Macmillan) which won the Carl Sandburg Award for the best nonfiction book of 1984. As publisher of *OS/2 Professional*, Mr. Black was nominated by the editors of *Inc. Magazine* as "Entrepreneur of the Year."

WILLIAM ZACHMANN. Mr. Zachmann, an *OS/2 Professional* columnist, is a world-renowned expert on information technology. His analysis of the present period as one of transition into the sec-



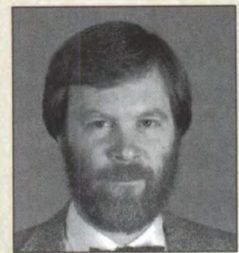
ond era of information systems has been influential in the industry. A former senior vice president of International Data Corporation, Zachmann has been a well-known columnist for *PC Magazine*, *PC World*, *Computerworld*, *InfoWorld*, and *PC Week*.

JOHN C. DVORAK. Mr. Dvorak is an illustrious computer columnist, book writer, and virtual icon in the industry. His columns appear in the *San Francisco Examiner*, *PC Magazine*, *MacUser*, *PC Computing*, *Microtimes*, and many more.

LOIS A. DIMPFL. Ms. Dimpfel, PSP director of personal operating systems, is one of OS/2's most energetic and engaging



speakers. Her responsibilities include OS/2 and AIX development functional strategy, plan control, and inter-lab/inter-IBM communications and issue resolutions.



Hotel and Special Events

MARRIOTT'S DESERT SPRINGS RESORT & SPA is a tropical oasis of spectacular proportions, surrounded by snow-capped mountains and the desert beauty of Southern California. The complex includes a 27,000-square-foot European-style spa, two 18-hole golf courses, 20 tennis courts, three swimming pools, and ten great restaurants.

SPECIAL EVENTS at the OS/2 Professional Interchange will make your days and nights at the OS/2 Oasis memorable.

- Poolside on Sunday night you'll meet and mingle at the opening reception, *Meet me at the Oasis*.
- Join us Tuesday night for our party, *Streets of California*, followed by the *OS/2 Gigabyte*

Games. And cash in your OS/2 Chips—which you'll pick up in every session, event, or activity—by entering the last-day raffle for a

laptop, software, and other valuable prizes.

- Pick up the products, extras, and souvenirs you need at the *Bazaar*.

- Visit the exhibitor hall for hands-on demonstrations of the latest software and hardware.

- The First Annual *OS/2 Professional Awards* will celebrate the individuals who've been at the forefront of OS/2 in the past year, the top new products of the year, and some surprise achievements.



A preview of the fascinating OS/2 sessions you can attend:

APPLICATION DEVELOPMENT

- Application Development Directions
- Multithreading OS/2 Applications
- Visual Builders
- Graphical Programming Interface
- Programming Techniques

C AND C ++

- IBM C Set ++ for OS/2
- Introduction to IBM C Set ++ Class Libraries
- C Set ++ Optimization Tips and Techniques
- Migrating to C Set ++
- C Set ++ Debugging Tips and Techniques
- Performance Tuning with EXTRA from C Set ++

COMMUNICATIONS

- Communications Manager/2: Installation & Configuration Tips & Techniques (Part 1)
- Communications Manager/2: Installation & Configuration Tips & Techniques (Part 2)

DATABASE

- IBM DB2 Family
- IBM Database 2/2 Client/Server Programming

DEVICE DRIVERS DEVELOPMENT

- Building Virtual Device Drivers
- Device Driver Development Techniques

DISTRIBUTED SYSTEMS MANAGEMENT

- IBM Distributed Systems Management: Trends & Directions
- IBM LAN NetView Family Overview
- IBM LAN NetView: Integrating Managing Applications with an Object-Oriented Topology Display

LAN SYSTEM SOLUTIONS

- OS/2 LAN Server 3.0 Overview
- LAN Systems Peer Capability
- OS/2 LAN Server Tips & Techniques (Part 1)
- OS/2 LAN Server Tips & Techniques (Part 2)
- Multi-Protocol Transport Services
- NetWare Server for OS/2

MULTIMEDIA

- Multimedia Trends and Directions
- Multimedia Presentation Manager/2:32-bit Support
- OS/2 2.1 Software Motion Video
- OS/2 Tools for Multimedia Application Development

OBJECT-ORIENTED TECHNOLOGY

- Personal Software Products Vision
- Personnel Systems Object Technology Plans
- SOMObjects Developer Toolkit & Future Directions
- System Object Model (SOM): A Technology for Language-Independent Objects
- Developing Distributed System Object Model (DSOM) Applications
- Object-Oriented REXX Technology
- Distributed Object Architecture: From Databases to Multimedia with DSOM

OPEN SYSTEMS

- DCE Application Programming Interface
- OS/2 LAN Server, Novell, Banyan and TCP/IP Coexistence
- X-Window System for OS/2

OS/2: THE SYSTEM

- OS/2 Up-to-the-Minute
- OS/2 Architecture on the Microkernel
- OS/2 System and Application Performance Tuning
- Comparing and Contrasting OS/2 and Windows
- DOS and Windows Compatibility

PLUS...INDUSTRY LUMINARIES SPEAK OUT:

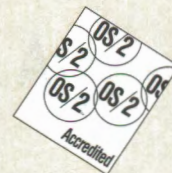
- Writing Multithreaded Applications or GPI
- Connectivity Challenges in an OS/2 Environment
- Designing Applications for OS/2 Users or OS/2 & You, What It Is, What It Means
- How to Market Products, Vendor Relationships & Who's Who in IBM
- Windows under OS/2
- Exploiting Workplace Shell
- Symposium on Media Ethics

Find the OS/2 Oasis in the desert. Space is limited...register now!
For registration information turn the page.





OS/2 PROFESSIONAL INTERCHANGE
OCTOBER 17-20, 1993
MARRIOTT'S DESERT SPRINGS RESORT & SPA,
PALM DESERT, CALIFORNIA



INTERCHANGE REGISTRATION

REGISTRATION FEE IS \$795.

If you register *before* August 2, 1993.
(\$895 after August 2)

☐ **YES**, Register me now! Payment may be made in U.S. dollars, by VISA, MasterCard, American Express, or check/money order

LAST NAME _____

FIRST NAME _____

TITLE _____

COMPANY NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

COUNTRY _____

TELEPHONE _____

FAX _____

Return this form with your payment to:

OS/2 Professional Interchange, 731 Main St.,
Monroe, CT 06468.

☐ **YES**, I'd like to subscribe to 12 monthly issues of *OS/2 Professional* at \$30 per year. Bill me along with my Interchange registration.

For faster registration call (800) 438-6720 or fax this form to (203) 261-3884.

TOTAL ENCLOSED: \$ _____

☐ CHECK ☐ AMEX ☐ MC/VISA ☐ DINERS

ACCT. # _____

EXP. DATE _____

CARDHOLDER'S SIGNATURE: _____

PURCHASE ORDER # _____

HOST HOTEL

Marriott's Desert Springs Resort & Spa
74855 Country Club Drive
Palm Desert, California 92260
(619) 341-2211

\$135.00 Single/Double Occupancy

All meetings, meals and social functions will be held at Marriott's Desert Springs Resort & Spa

PRE-CONFERENCE

Pre-Conference Tutorials at no charge. Attendees will receive free software at respective sessions. **Space limited.**

☐ **YES**, Register me for

☐ Lotus 1-2-3 ☐ DeScribe ☐ Stacker

AIR AND GROUND TRANSPORTATION

OS/2 Professional's host airlines are America West and American Airlines, offering discounts up to 45%! To reserve, or for information, call (800) 438-6720, or call the airlines direct:

• America West: (800) 548-7575
(Refer to CAMS Code 14788CD)

• American Airlines: (800) 433-1790
(Refer to file #0303AX)

For discounts on American Airlines, call the conference hotline.

Hertz and Budget are offering discounts, too!

• Hertz: (800) 654-2240
(mention CV#8013)

• Budget (800) 772.3773
(mention VNR7/CTNMP)

Interchange events of this type tend to sell out early. To make sure that you'll be flying directly into Palm Springs, and staying at the host hotel, REGISTER NOW.

Cancellation Policy: Registrations are non-refundable but are transferable to upcoming events.

Sponsored by OS/2 Professional, a publication of IF Computer Media, Inc., in association with IBM's Independent Vendor League. CT Meeting Planners is the official conference planner of OS/2 Professional Interchanges.

Please note: All events and speakers listed in this offering are current as of press time and are subject to change as we strive to keep you on top of the rapidly-evolving world of OS/2.



1 800 GET OS20 • (800-438-6720)

Circle #106

INPUT

continued from page 81

As a last note, I find it refreshing to find a publication that's not intimidated and exudes enthusiasm. This magazine has been fun to read, and my gray matter would rather argue any erroneous or outlandish prose than ask you to cut it out no matter how one-sided it is. It's great to find a magazine where we can join in the celebration of our discoveries. And for those of you who can't handle it, we'll move on when we're good and ready. ♦

James Kellndorfer, President

*The Small Investor's Software Company
Amityville, New York*

Letters to IBM

First I would like to commend you on an informative publication. *OS/2 Professional* shows that changing your approach in addressing your audience enhances your ability to persuade. As a consultant to various small businesses, I come in contact with many computer users. Most of them say that OS/2

scares them because of all the installation and crash stories they've heard. Obviously word of mouth has considerable bearing in the accusation and use of software. Here's my question: Why does a version upgrade from 2.0 to 2.1 cost the user? Why isn't IBM offering this upgrade free to 2.0 users? Doing so might convince the computer public that IBM is trying to reverse the 2.0 flop. I believe IBM should consider word of mouth more than high dollar commercials and put the money into the hands of users in the way of free upgrades. ♦

Michael Dindore

*M&M Advance
Port Arthur, Texas*

I like OS/2. What bothers me is having to pay more for the 2.1 upgrade than I did for 2.0 itself. A substantial part of the appeal of 2.1 is that it does some of the things 2.0 itself was supposed to do ("a better Windows than Windows"). If you say your software does things it actually does not do and then you say,

"Wait a year while I fix it and then I'll sell it to you again for more money," you're asking too much. Other industries would not sustain such indulgences. Would a car maker get along if he said, "If you buy this exploding Pinto from me today, I can sell you a nonexploding Pinto next year for more money. Aren't I nice to you?" It's deceptive to have to buy something twice because they didn't get it right the first time.

Adam Cargill

Fairfield, Iowa

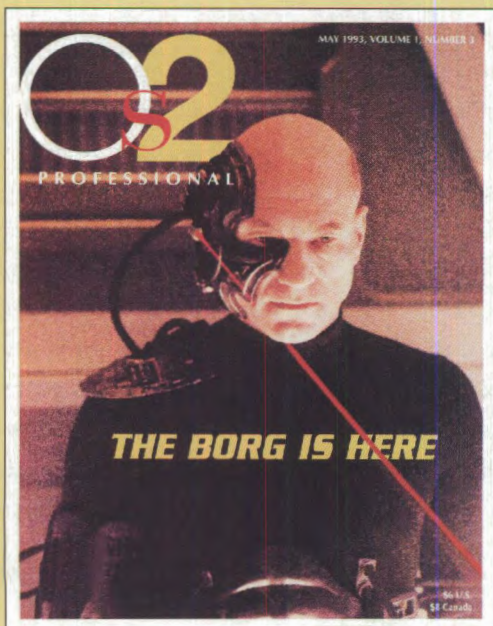
Professional praise

As an IBM Business Partner developing advanced multimedia applications on the OS/2 platform, we have been provided with several copies of *OS/2 Professional*. My staff and I wish to express our pleasure in your publication. It has become highly recommended reading material for our clientele. ♦

Douglas Beardshaw

*President, Touch Communications
Ottawa, Ontario*

\$6 Special While Supplies Last!



By popular demand, posters of our May 1993 "Borg" cover are now available. Poster measures 17"x 22" and is suitable for framing. Specify quantity, shipping address and billing information below, and allow 4-6 weeks for delivery.

Please send me _____ posters (\$6 each) \$ _____
add shipping \$ \$3.00
TOTAL enclosed \$ _____

Name _____

Address _____

City _____ State _____ Zip _____

Enclose check or money order or charge card authorization.

Please bill my ☐ Visa ☐ MasterCard

Card number _____ Exp. Date _____

Signature _____

Send to: **DISC-O-TECH**
7831 Woodmont Ave., #381 • Bethesda, MD 20814



LET THE CHIPS FALL

OS Wars and Winners

The Great Operating System War of 1993 has begun. In its early stages, this war, like most of the others of our time, is being played out in the press more than in the streets. But already there have been some engagements and lots of maneuvering for position. For example, AT&T has completely bowed out of the battle with the sale of its UNIX group, Unix Systems Laboratories, to Novell. With its recent deals, Novell has now closed ranks with IBM and pivoted to face off against Microsoft.

Meanwhile, Sun has started delivering the OEM beta release of its x86 Solaris, which ought to fit nicely on top of the v.3 UNIX that is now shipping as a result of its acquisition of Interactive Systems Corporation.

The other combatants are the dark-horse x86 OS contenders: Nextstep, DR-DOS, SCO UNIX and the UNIX work-alikes from QNX, Lynx, BSDI, and Coherent. Some of these contenders projected they'd be selling millions of copies annually by now, but currently, only OS/2 is delivering on its volume predictions.

Meanwhile, Microsoft continues to dominate the retail and OEM channels with a 12-year-old product that is rapidly becoming as technologically obsolete as the CP/M operating system from which it was cloned.

Enter NT, the gleam in Bill Gates' eye that could grow into a major 32-bit heavy hitter and which has pounced looking like the PL1 of operating systems. Piggybacking on the popularity of Windows 3.1, NT has the potential to become a winner, but it will take Microsoft at least a year to iron out the hardware support and size issues that distinguish a PC operating system from an also-ran.

Despite the impending arrivals of bells-and-whistles OSs optimized for the post-Pentiums, power PCs and Alpha chips of the mid-'90s, though, I don't see anyone dominating the market in this decade the way DOS did the '80s, mainly because there is no consensus in the industry about the role of the PC.

In fact, there may not be any such thing as a PC.

For example, we recently configured a system with 20 processors, not counting the 486 on the motherboard. The only thing about the system that had a "PC ring" to it was the price, which

was less than \$50,000. Unsurprisingly, the operating system for this beast was not DOS, but UNIX (to be totally accurate in this world of dueling UNIXes, it was ISC UNIX v.3). However the five QuadPuters we packed into the box could have just as easily run on OS/2 or Solaris, so long as we had NFS and TCP/IP support.

One of the problems with the new diversity of hardware is the amount of time it takes for operating systems to be scaled or ported or re-coded in order to work on what is running in the field. These days, when a new product from one of the OS contenders comes to market, expect it to take at least a year before it runs reliably on anything but a shrink-wrapped, plain vanilla CPU-bearing device.

How bad has it become? I recently asked my sister—a doctor who automated the entry of her patient data, then contracted with several other doctors in her office to outsource data maintenance to her—how it was going. Her answer: "Don't ask."

She went on to report that she recently threw out all her PCs, and replace them with—are you ready?—NeXTs. Why? She said she got tired of paying \$100 per hour for consultants to keep patching DOS so that it would work with XENIX.

The bottom line for DOS users is that they need a replacement product that will make it possible to integrate DOS-like machines with the other productivity tools that they are using, or going to want to use, in their offices or labs. This replacement must provide the support and performance that was delivered by the mainframes and later the minis of the '80s, and it must work on the hardware that is out there today.

The real winner of the war will be that company or group of companies that can create the standards and cohesiveness required to accomplish this integration. Only time will tell. But I believe that the conservative MIS managers who currently control \$500 billion worth of IBM mainframes are ultimately going to be the driving force that guarantees OS/2's success. Perhaps that is why IBM CEO Louis Gerstner specified one fundamental in his strategy for recovery: "connect with everything." ♦

*Stephen Fried
Microway*

CORELDRAW!

THE POWER TO DO IT ALL

CorelDRAW 2.5 for OS/2 (version 2.0) contains easy-to-use CorelDRAW, CorelCHART, and Corel PHOTO-PAINT – all in one value-packed box. Now there is no need to buy any other software package. CorelDRAW gives you the power to do it all!

CorelDRAW is a 32-bit illustration software program, specifically developed for OS/2, that takes full advantage of the power and threading capabilities of OS/2 version 2.0 or higher. Now you can create effective slides, flyers, brochures, newsletters, creative designs and technical illustrations easily – and up to 25% faster than ever before!

CorelCHART lets you deliver information with dynamic 2-D and 3-D data-driven charts, bars, pies and pictographs. This completely versatile Windows charting package operates seamlessly with OS/2 and lets you input your own data or import from popular spreadsheet packages.

Dress up all your documents and presentations or retouch color or black and white scanned images easily with Corel PHOTO-PAINT, a Windows photo-editing application that also works seamlessly with OS/2.

Whatever your communication needs, CorelDRAW for OS/2 gives you the power to do it all! CorelDRAW's intuitive interface, on-line help and tutorial video make it a joy to use. With all of these outstanding features and incredible value, it's no wonder CorelDRAW is the best-selling illustration software in the world.

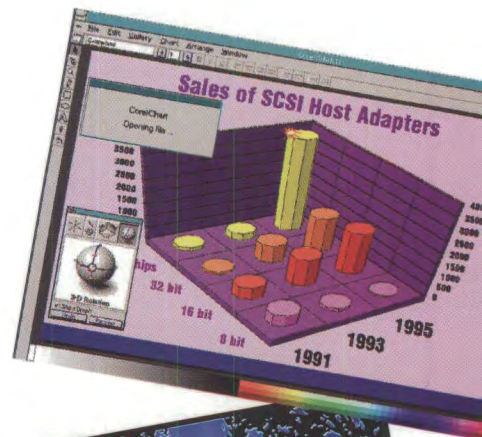
All this, plus a bonus CD-ROM disc with over 12,000 clipart images and symbols and over 250 fonts, makes CorelDRAW the complete graphics solution for OS/2 users!

CORELDRAW 2.5

for OS/2 (version 2.0)

Call for a free demo disk and brochure.
1-800-772-6735 ext. 13

Circle #5



\$199
Suggested List Price



COREL
TEL: 1(613)728-3733
FAX: 1(613)761-9176

EUR 0003

Window Washer

Screen Saver and Keyboard Lock For OS/2



Accepts GIF, BMP, TIF & Others
Digital Audio & Video Enabled
Exciting New Screen Effects

\$39.95 Retail
\$19.95 Competitive Upgrade
\$ 9.95 Version 1.X Upgrade

One UP Corporation
1603 LBJ Freeway
Suite 200
Dallas, Texas 75234
Fax (214) 620-9626

Order Now !
(800) 678-01UP

Circle #67

One **UP** Corporation